# User Manual & Web Client Guide

## TVR-LT Digital Video Recorder

Version 2.50

American Dynamics

8200-0612-01 A0

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Do not expose this appliance to rain or moisture.
Do not install this product in hazardous areas where highly combustible or explosive products are stored or used.

The lightning flash/arrowhead symbol, within an equilateral triangle, alerts the user to the presence of a shock hazard within the product's enclosure.

I.T.E
E178610

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**"CAUTION: Risk of Explosion if battery is replaced by an incorrect type, dispose of used batteries according to the battery manufacturer's instructions."**

This equipment has been tested and found to comply with the limits for a Class "B" digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

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This class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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# Part I Local Device Operation

# Chapter 1 Introduction

## 1.1 Overview

Thank you for your purchase of TVR-LT series Digital Video Recorder (DVR). To get the most out of your TVR, please read through the *User's Manual and Web Client Guide* thoroughly.

The TVR-LT series DVR, shown in Figure 1-1, is a new generation product developed by Tyco. Built on an embedded platform and combining the latest in advanced H.264 video encoding and decoding technologies, the TVR-LT is the perfect combination of rock-solid reliability and high performance.

Figure 1-1

## 1.2 Key Product Features

**Compression**

- Supports PAL/NTSC video input.
- Adopts the H.264 video compression standard.
- Video encoding parameters of each channel can be set separately, including stream type, resolution, frame rate, bit rate and image quality.
- Each channel supports two sets of compression parameters, i.e. normal continuous compression and event compression.
- Supports both composite (video & audio) stream and video stream. Audio and video streams are strictly simultaneous.

**Monitoring**

- High definition VGA display supports 1024*768 resolution.
- Supports 1/4/9/16 screen live view, channel sequence is adjustable.
- Supports live view group switch, manual switch and automatic switch. The interval of automatic switch can be adjusted.
- Supports digital zoom on live view.
- Supports shielding the assigned live view channel.
- Supports motion detection, view tampering alert, video exception alert and video loss alert.
- Supports privacy mask.
- Supports various PTZ protocols, PTZ preset, sequence and pattern.
- Supports zoom in by clicking the mouse and trace function by dragging.

**HDD Management**

- Supports 4 SATA HDD. Each HDD can support up to 2TB capacity.
- Supports S.M.A.R.T. technology.
- Supports HDD standby function.
- Supports hard disk group management.

- HDD file system is compatible with Windows. Uses pre-allocating hard disk management technology with no disk fragments.

**Recording and Playback**

- Supports cycle and non-cycle recording mode.
- Supports normal and event video encoding parameters.
- Supports multiple recording types, including continuous, alarm, motion, motion | alarm and motion & alarm.
- Supports 8 recording time periods with separate recording types.
- Supports pre-record and post-record time for alarm and motion detection.
- Supports locking and unlocking video files.
- Supports local redundant recording.
- Supports setting hard disk to read only.
- Supports video data search and playback by channel number, recording type, time and file type.
- Supports digital zoom function in playback.
- Supports pause, fast forward, play slow, skip forward, and skip backward when in playback, locating in progress bar by dragging the mouse.
- Supports synchronous playback of up to 8 channels (TVRLT08XXX and TVRLT16XXX).

**Data Backup**

- Supports USB device backup.
- Supports SATA CD/DVD-R/W backup.
- Supports backup by file or by time.
- Supports backup device maintenance and management.
- Supports video clips backup when in playback.

**Alarm & Exception**

- Supports alarm in/out and arming schedule setting.
- Supports various alarm input such as hard disk full, illegal access, network break, IP conflicted, hard disk error, video exception, and video output standard mismatch.
- Supports various alarm response such as camera recording, relay out, on-screen warning, audible warning, notify remote client and send email.
- Supports auto recovery from exceptions.

**Network**

- Supports 10/100M adaptive network interface.
- Supports TCP/IP protocols, PPPoE, DHCP, DNS, DDNS, NTP, and SADP.
- Supports unicast and multicast, support TCP, UDP, and RTP for unicast.
- Supports remote search, playback and download video files, supports breakpoint resume.
- Supports remote configuration, supports remote import and export of DVR settings.
- Supports remote acquisition of device status, system log and alarm status.
- Supports remote button operation, remote locking and unlocking of panel buttons.
- Supports remote format of hard disk, upgrade, reboot, shutdown and other system maintenance operations.
- Supports RS-232 and RS-485 transparent channel transmission.
- Supports event alarm and exceptions upload to remote management host.
- Supports remote PTZ control.
- Supports voice talk and broadcast.
- Built-in WEB Server.

**Other**

- Supports front panel, mouse, and IR control.
- Supports multi-level user management. Each user can have individual DVR access rights.

• Powerful DVR log, including operation, alarm and exception log.

## 1.3 Product Application Diagram

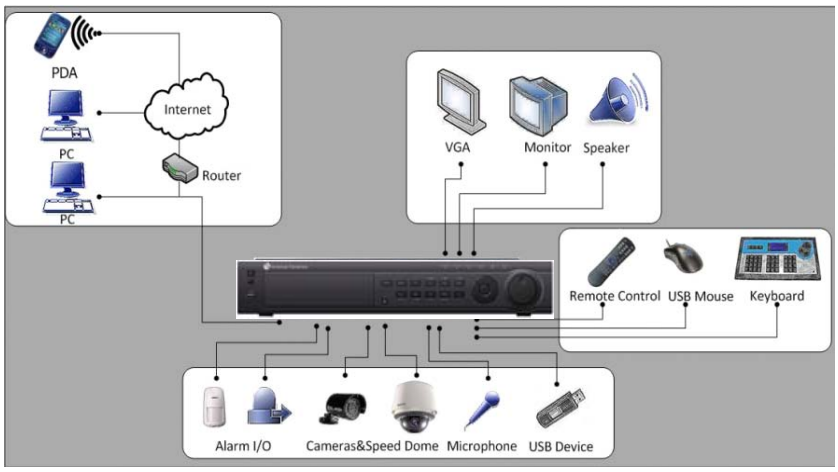



Figure 1-2 Product Application Diagram

## 1.4 Operating Your TVR

There are several ways to navigate and operate your TVR-LT. You may use the **Front Panel,** the included **IR (Infra-Red) Remote Control**, a **Mouse** and the On-screen **Keyboard**.

## 1.5 Using the Front Panel Controls

Your TVR-LT comes with built-in front panel controls, as shown in Figure 1-3.

Figure 1-3 TVR-LT Front Panel Controls

The controls on the front panel include:

1. **POWER Button:** The POWER button is used to power on or power off the DVR.
2. **IR Receiver:** Receives signals from IR Remote Control.
3. **USB Port:** Universal Serial Bus (USB) ports for additional devices such as USB mouse or USB Hard Disk Drive (HDD).

4. **Status Indicators:** Status indicators for different features of the TVR-LT.
   - **POWER:** Power indicator flashes green when the DVR is powered on.
   - **Status:** Status indicator turns green when the DVR is controlled by an IR remote. It turns red when **SHIFT** button is pressed to enable letter/numeric input mode.
   - **Ready:** Ready indicator turns blue when the DVR is functioning properly.
   - **Alarm:** Alarm indicator turns red when a sensor alarm is detected.
   - **HDD:** HDD indicator flashes red when data is being read from or written to the HDD.
   - **Tx/Rx:** Tx/Rx indictor flickers green when network connection is functioning properly.

5. **Control Buttons:**
   - **1/MENU Button:** The 1/MENU button works as numeric [1]. Pressing this button will return the user to the Main menu (after successful login). The 1/MENU button will also bring up Sensitivity Interface settings.
   - **2ABC/F1:** The 2ABC button works as numeric [2] and letters [ABC]. When used in a list field it will select all items on the list.
   - **3DEF/F2:** The 3DEF button works as numeric [3] and letters [DEF]. It is also used to cycle through tab pages.
   - **4GHI/ESC:** The 4GHI/ESC button works as numeric [4] and letters [GHI], it is also used to escape to the previous menu
   - **5JKL/EDIT:** The 5JKL/EDIT button works as numeric [5] and letters [JKL]. The 5JKL/EDIT button is used to edit text fields. When editing text fields, it will also function as a Backspace button to delete the character in front of the cursor. On checkbox fields, pressing the 5JKL/EDIT button will tick the checkbox. In Playback mode, it can be used to generate video clips for backup. In Export/Import mode, it can be used to navigate file folders.
   - **6MNO/PLAY:** The 6MNO/PLAY button works as numeric [6] and letters [MNO]. It is used to enter the Playback menu. It is also used to turn audio on/off in the Playback menu.
   - **7PQRS/REC:** The 7PQRS/REC button works as numeric [7] and letters [PQRS].
   - **8TUV/PTZ:** The 8TUV/PTZ button works as numeric [8] and letters [TUV]. It is also used to enter the PTZ Control mode.
   - **9WXYZ/PREVIEW:** The 9WXYZ/PREVIEW button works as numeric [9] and letters [WXYZ]. It is also used to switch between single screen and multi-screen mode.
   - **0/A:** The 0/A button works as numeric [0]. It is also used to switch between input methods (upper and lowercase alphabet, symbols and numeric input). It can also be used to clear entire masked areas, such as in the Motion Detection and Privacy Mask menus.
   - **SHIFT:** The SHIFT button is used to switch the button function between a numeric button and a control button.

**Note**

Only English letters and numbers 0-9 can be typed via the front panel.

6. **DIRECTION/ENTER Buttons:**
   - **DIRECTION Buttons:** The DIRECTION buttons are used to navigate between different fields and items in menus. They have various functions in different modes:

   In Playback mode, pressing the Up or Down button once will speed up or slow down recorded video. Pressing the Left or Right button once will jump 5s forward or backward. Pressing the Left or Right button twice within 1s will jump 15s forward or backward. Pressing the Left or Right button three times within 1s will jump 30s forward or backward. The Left and Right buttons will select the next and previous day of recordings.

   In Preview mode, these buttons can be used to cycle through channels.

   In PTZ Control mode, pressing the Left or Right button twice within 1s or holding it for 1s makes the PTZ camera pan left or right. Pressing the Up or Down button twice within 1s or holding it for 1s makes the PTZ camera tilt up or down. Pressing the Up button and then the Left button within 1s makes the PTZ move in the upper left direction. The order of these two buttons is not restricted. PTZ movements in directions upper right, lower left and lower right can be controlled by similarly pressing the appropriate adjoining two buttons within a 1s interval.

• **ENTER Button:** The ENTER button is used to confirm a selection in any of the menu modes. It can also be used to tick checkbox fields. In Playback mode, it can be used to play or pause the video. In Single Play mode, pressing the ENTER button will advance the video by a single frame.

7. **JOG SHUTTLE Control:** The JOG SHUTTLE control can be used to move the active selection in a menu. The inner ring will move the selection up and down. The outer ring will move it left and right. In the Playback mode, the outer ring is used to jump 30s forward/backward in video files. Button F1 can be used to switch from playback to adverse playback, or vice versa. The inner ring can be used to speed up/slow down the video. In Preview mode, it can be used to cycle through different channels.

8. **DVD-ROM:** Slot for DVD-ROM. (Optional)

**Note**

It is important to note that you must click the EDIT button on either the remote or the front panel on a text field before being able to edit its content. After entering text, you must press the ENTER button to be able to move onto the next field.

## 1.6 Using the IR Remote Control

Your TVR-LT may also be controlled with the included IR remote control, shown in Figure 1-4. 2xAAA batteries must be installed before operating.

Figure 1-4 IR Remote Control

The keys on the remote control closely resemble the ones found on the front panel, including:

1. **POWER:** Turn DVR on/off.
2. **DEV:** Enable/Disable Remote Control.
3. **Alphanumeric:** Same as Alphanumeric buttons on front panel.
4. **EDIT:** Same as JKL/EDIT button on front panel.
5. **A:** Same as 0/A button on front panel.
6. **REC:** Same as 7PQRS/REC button on front panel.

7. **PLAY:** Same as 6MNO/PLAY button on front panel.
8. **INFO:** Reserved.
9. **VOIP:** Same as 2ABC/F1 button on front panel.
10. **MENU:** Same as 1/MENU button on front panel.
11. **PREV:** Same as 9WXYZ/PREV button on front panel.
12. **DIRECTION/ENTER Buttons:** Same as DIRECTION/ENTER buttons on front panel.
13. **PTZ:** Same as 8TUV/PTZ button on front panel.
14. **ESC:** Same as ESC button on front panel.
15. **RESERVED:** Reserved.
16. **F1:** Same as 2ABC button on front panel.
17. **PTZ CONTROL Buttons:** Buttons to adjust the iris, focus and zoom of a PTZ camera.
18. **F2 Button:** The F2 button is used to cycle through tab pages. It can also be used to enter the Channel and OSD Position settings.

Point the remote control at the IR receiver located at the front of the unit to test its operation. If there is no response:

1. Using the front control panel or the mouse, go into Menu > Settings > General > More Settings.
2. Check and remember DVR ID#. The default ID# is 255. This ID# is valid for all IR remote controls.
3. Press the DEV button on the remote.
4. Enter the DVR ID# from step 2.
5. Press the ENTER button on the remote control.

If the Status indicator on the front panel turns green, the remote control is operating properly. If the Status indicator does not turn green and there is still no response from the remote, please check the following:

1. Batteries are installed correctly and the polarities of the batteries are not reversed.
2. Batteries are fresh and not out of charge.
3. IR receiver is not obstructed.
4. No fluorescent lamp is being used nearby.

## 1.7 Using a USB Mouse

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can be used with this TVR-LT. To use a USB mouse:

1. Plug the USB mouse into one of the USB ports on the front panel of the TVR-LT.
2. The mouse should automatically be detected. If the mouse is not detected, please refer to the recommended device list from your provider.

**The operations linked with buttons on the mouse include:**

1. **Left Button:**
   • **Single-Click:** Select a component of a menu, such as a button or an input field. This is similar to pressing the ENTER button on the remote/front panel controls.
   • **Double-Click:** Switch between single screen and multi-screen mode in Preview mode.
   • **Click and Drag:** Clicking and dragging the mouse can be used to control the pan/tilt of a PTZ camera as well as to vary the position of a digital zoom area and camera OSD. It can also be used to set up the alarm areas.
2. **Right Button:**
   • **Single-Click:** Displays the pop-up menu.
3. **Mouse Scroll-Wheel:**

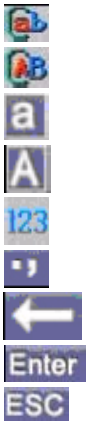
• **Scroll Forward:** In Preview mode, scrolling forward will switch to the previous screen. In Menu mode, it will move the selection to the previous item. In PTZ mode it functions as Zoom In.
• **Scroll Backward:** In Preview mode, scrolling backward will switch to the next screen. In Menu mode, it will move the selection to the next item. In PTZ mode it functions as Zoom Out.

## 1.8 Using the On-Screen Keyboard

When a mouse is used to perform tasks on the TVR, clicking on a text input field will bring up the On-Screen Keyboard, shown in Figure 1-5.

Figure 1-5 On-Screen Keyboard

**The buttons on the on-screen keyboard represent:**




**Lowercase:** Designates lowercase input is being used.

**Uppercase:** Designates uppercase input is being used.

**Switch to Lowercase:** Switch to lowercase input.

**Switch to Uppercase:** Switch to uppercase input.

**Number:** Designates number input is being used.

**Symbols:** Switch to symbols input.

**Backspace:** Delete the character in front of the cursor.

**Enter:** Confirm selection.

**ESC:** Exit out of On-Screen Keyboard.

Figure 1-6 On-Screen Keyboard Buttons

## 1.9 Rear Panel Diagram

Example for illustration: TVRLT16XXX

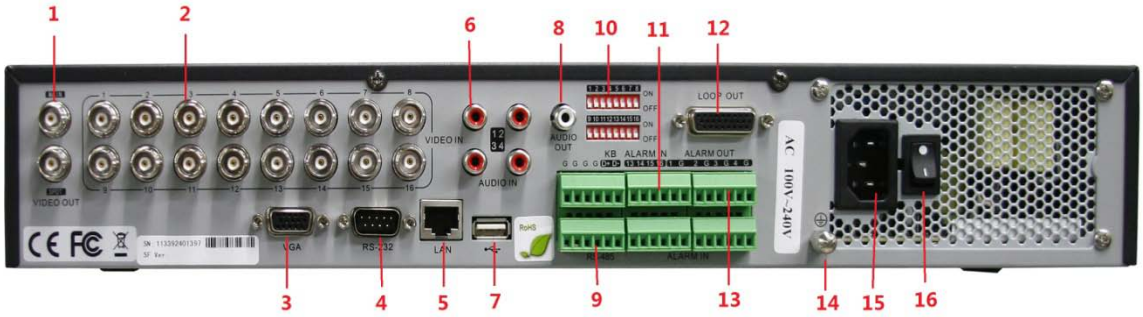



Figure 1-7 Rear Panel Diagram

| No. | Item | Description |
|---|---|---|
| 1 | **Main VIDEO OUT** | BNC connector for video output and menu display. |
| | **SPOT VIDEO OUT** | BNC connector for spot monitor. Single window view. |
| 2 | **VIDEO IN** | BNC connectors for analog video input. |
| 3 | **VGA** | VGA output. Display local video output and menu. |
| 4 | **RS232** | DB9 connector for RS232. |
| 5 | **LAN Interface** | Connector for LAN (Local Area Network). |
| 6 | **AUDIO IN** | RCA connectors for analog audio input. |
| 7 | **USB Interface** | Connector for USB devices. |
| 8 | **AUDIO OUT** | RCA connector for audio output. This connector is synchronized with VIDEO OUT. |
| 9 | **RS-485 Interface** | Connector for RS-485 devices. T+, T- pin connects to PTZ.<br>Connector for KB devices. D+, D- pin connects to special keyboard. |
| 10 | **Loop Out Switch** | DIP switches for Loop Out. Switch on when a monitor is connected via the Video Loop Out interface. Switch off when no monitor is connected via the Video Loop Out interface. |
| 11 | **ALARM IN** | Connector for alarm input. |
| 12 | **Video LOOP OUT** | 16-ch DB15 connector for video loop out |
| 13 | **ALARM OUT** | Connector for alarm output. |
| 14 | **GROUND** | Ground(needs to be connected at DVR startup) |
| 15 | **POWER** | AC 100~240V |
| 16 | **Switch** | Turn the device on/off |

Please note that VGA and Main Video Out support menu display but they are exclusive:

| Monitors Connected during TVR-LT Boot | VGA Output | CVBS1 Output |
|---|---|---|
| **None Connected** | No output | Main Monitor with Menu |
| **Composite CVBS1 only** | No output | Main Monitor with Menu |
| **VGA only** | Main Monitor with Menu | No output |
| **Both Connected** | Main Monitor with Menu | No output |

# Chapter 2 Getting Started

## 2.1 Starting and Shutting Down Your TVR

Proper startup and shutdown procedures are crucial to extending the life of your TVR-LT.

**To start up the TVR-LT:**
1. Ensure the power supply is plugged into an electrical outlet. It is highly recommended that an Uninterruptible Power Supply (UPS) is used in conjunction with the unit.
2. Turn on the switch on the rear panel
3. After startup, the Status indicator LED will remain green.

**There are two ways to shut down the TVR-LT:**

**OPTION 1: via Shutdown menu**
1. Enter the Shutdown menu shown in Figure 2-1 by clicking on Menu > Shutdown.

Figure 2-1 Shutdown Menu

2. Select the Shutdown button.
3. Click “Yes” to the message “Are you sure to turn off TVR-LT?”
4. Turn off the switch on the rear panel.

**OPTION 2: Manual Shutdown**
1. Press and hold the POWER button for 3 seconds.
2. Enter the administrator username and password in the dialog box for authentication.
3. Click the Yes button.
4. Message “Are you sure to turn off TVR-LT?” will open.
5. Click “Yes” then the message “Shutting down” will open.
6. Turn off the switch on the rear panel.

## 2.2 Rebooting and Locking Your TVR-LT

While in the Shutdown menu (Figure 2-1), you may also reboot or lock your TVR-LT. Locking your TVR-LT will return you to the Live Preview mode, which will require a user name and password to exit. Pressing the Reboot button will reboot your TVR-LT.

To reboot or lock the TVR-LT:
1. Enter the Shutdown menu by clicking Menu > Shutdown.

2. Select the Lock button to lock the TVR-LT or the Reboot button to reboot it.

## 2.3 Switch user

While in the Shutdown menu (Figure 2-1), you may also switch user account to access different operation privileges of the TVR-LT.

To switch user:
1. Enter the Shutdown menu by clicking Menu > Switch user.
2. Click Switch User button and enter the new username and password in the dialog box for authentication.
3. Click Yes.

## 2.4 Using the Setup Wizard

By default, the Setup Wizard will start once the TVR-LT has loaded, as shown in Figure 2-2. The Setup Wizard will guide you through some of the common settings of your TVR-LT.
The first step is language selection. The GUI language is English by default, however, other listed languages are available. Click Cancel to skip this step and use the default language.

Figure 2-2 Language Selection

The Setup Wizard will then guide you to other settings.
If you do not wish to use the Setup Wizard at this time, click Cancel. You may also choose to use the Setup Wizard at a later time by leaving the **"Start Wizard when DVR starts?**" checkbox selected.

Figure 2-3 Setup Wizard

**To start using the Setup Wizard:**

**1.** Click Next on the Wizard window. This will take you to the **User Permission** window, shown in Figure 2-4.

Figure 2-4 User Permission

2. Navigate to the **Admin Password** input field.
3. Enter the admin password (12345 by default).
4. To change the admin password, select **New Admin Password** checkbox. Enter the new password and confirm it in the respective fields.
5. Click Next. This will take you to the **Record Settings** window, as shown in Figure 2-5.
6. To configure Record Settings, click Enter.

Figure 2-5 Record Settings

7. Select the Record Schedule tab, shown in Figure 2-6.

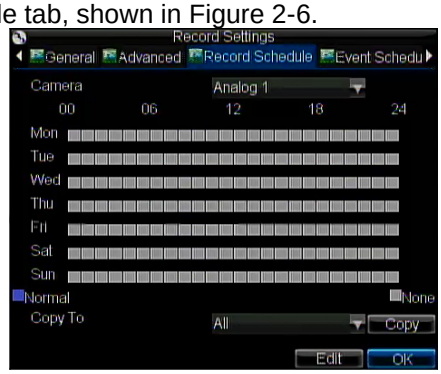


Figure 2-6 Normal Schedule Settings

8. Click Edit. This will open up a new recording schedule, shown in Figure 2-7.
9. Select both the **Enable Schedule** and **All Day** checkbox. This will enable the recording schedule and have it record continuously all day.

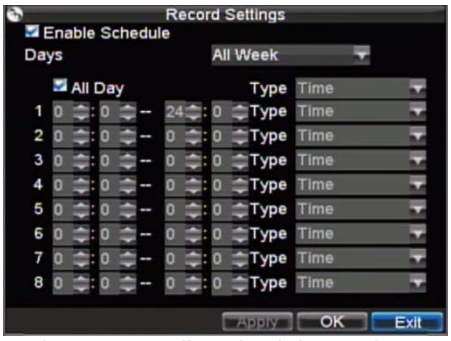


Figure 2-7 Edit Schedule Settings

**10.** Click OK. This will take you back to the **Schedule** tab. You can also copy the edited schedule to another channel or all of the other channels selected from the drop-down menu in the 'Copy To' field.

**11.** Select the **Event Schedule** tab, shown in Figure 2-8.

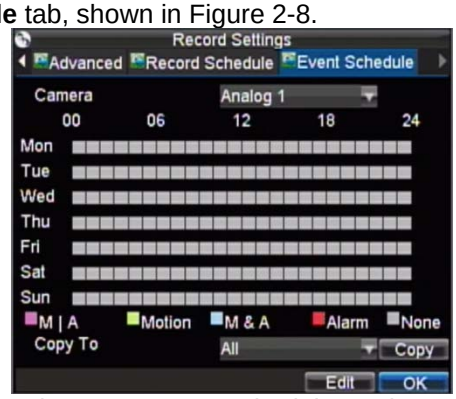


Figure 2-8 Event schedule Settings

**12.** Click Edit. This will open up a new recording schedule, shown in Figure 2-9.

**13.** Select both the **Enable Schedule** and **All Day** checkbox. This will enable the event recording schedule and have it record continuously all day. Choose event Type from the drop down list of available events.

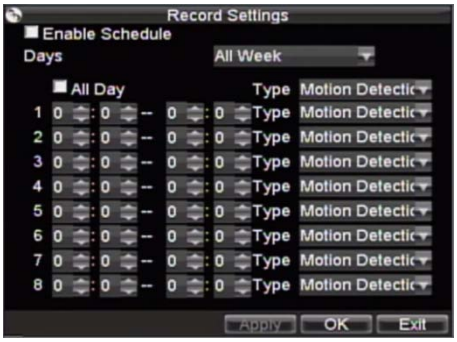


Figure 2-9 Edit Event Schedule Settings

**14.** Click OK. This will take you back to the **Schedule** tab. You can also copy the edited schedule to another channel or all of the other channels selected from the drop-down menu in the 'Copy To' field.

**15.** Click Next. This will take you to the **Network Settings** window, shown in Figure 2-10.

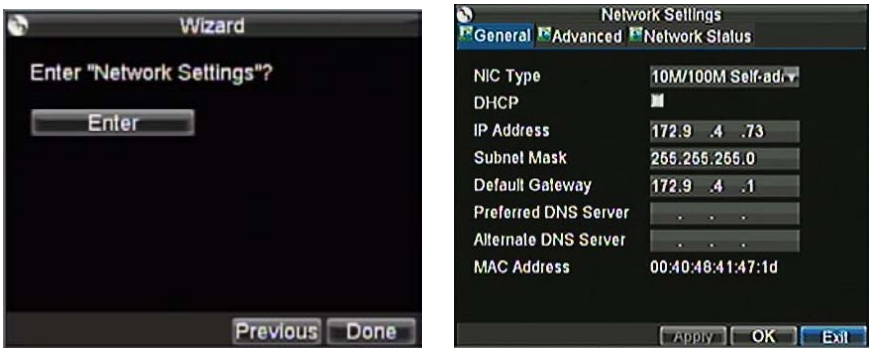



Figure 2-10 Network Settings

**16.** To configure network parameters, click Enter.
**17.** Enter the **IP Address**, **Subnet Mask** and **Default Gateway**.
**18.** Click OK to return to the Setup Wizard.
**19.** When all the settings are finished as desired, click Done to exit the Setup Wizard.

## 2.5 Setting Date & Time

It is extremely important to set up the system date and time correctly in order to timestamp recordings and events accurately.

**To set up date and time:**

1. Open the Menu window by clicking the MENU button on the IR remote control or the front panel of your TVR-LT. You can also go to the Menu window by right-clicking with the mouse and clicking Menu.
2. Click the Settings icon.
3. Select the General tab. You will be taken to the General Settings window, as shown in Figure 2- 11.

Figure 2-11 General Settings

4. Enter the correct date and time under **System Date/Time**, and choose Time Zone according to your actual region.
5. Click Apply to save the settings.
6. In addition, NTP can be applied to synchronize date/time automatically with an Internet time server. Please refer to Section 8.4 *Configuring an NTP Server*.

Figure 2-12 NTP Settings

# Chapter 3 Live Preview

## 3.1 Live Preview

The Live Preview mode is automatically started after the TVR-LT boots up. It is also at the top of the menu hierarchy, and thus hitting the ESC key multiple times (depending on which menu you are in) will bring you to the Live Preview mode.

## 3.2 Understanding Live Preview Icons

There are two icons on each display in Live Preview mode to indicate the camera status. They are:

**Event Icon:** Indicates video loss or tampering, motion detection and/or sensor alarm.

**Recording Icon:** Indicates the current channel is recording. The recording may have been started from a schedule and/or triggered by motion or alarm.

## 3.3 Live Preview Related Operations

In Live Preview mode, you can:

1. **Display Single Camera:**
   - **Using the Front Panel/Remote:** Use Alphanumeric buttons.
   - **Using the Mouse:** Select Single Camera in the right-click menu.

2. **Preview Layout Switch:**
   - **Using the Front Panel/Remote:** Click PREV button.
   - **Using the Mouse:** Select Multi-Camera in the right-click menu.

3. **Manual Switch:**
   - **Using the Front Panel/ Remote Control:** To move to the previous screen, click the Left direction button. To move to the next screen, click the Right direction button.
   - **Using the Mouse:** Select Next screen in right-click menu.

4. **Auto Switch:**
   - **Using the Front Panel/Remote Control:** Click the ENTER button.
   - **Using the Mouse:** Select Start Sequence in the right-click menu.

5. **Digital Zoom:**
   - **Using the Mouse:** Select Digital Zoom in the right-click menu.

## 3.4 Using the Mouse in Live Preview

Many features of the Live Preview can be quickly accessed by clicking the right-button of the

mouse (shown in Figure 3-1). These features include:

• **Single Camera:** Switch to a full screen display of the selected camera. The required camera is selected from a drop down list.

• **Multi-Camera:** Switch between different display layout options. Layout options can be selected from a drop down list.

• **Next Screen:** When displaying less than the maximum number of cameras in Live Preview, clicking this feature will switch to the next set of displays.

• **Playback:** Enter Playback mode.

• **Instant Playback:** Enter Instant Playback mode, the selected camera will be played from the earliest video of the day.

• **PTZ:** Enter PTZ Control mode.

• **Digital Zoom:** Enter the Digital Zoom interface.

• **Menu:** Enter Main menu.

• **Start VGA/CVBS1 Auto-switch:** Enable sequencing in Live Preview mode.

• **Start CVBS2 Auto-switch:** Enable sequencing in Live Preview mode.

**Note**

The dwell time should be set in Preview Settings before using **Start Auto-switch**.
If some cameras are to be skipped in sequenced live view, those cameras can be marked with an 'X' and they will not be displayed, please refer to Chapter 3.7

Figure 3-1 Live Preview Mouse Menu

## 3.5 Using Digital Zoom

**To use digital Zoom in Live Preview mode:**

1. Right-click using the mouse in Live Preview mode.
2. Select Digital Zoom from the Mouse menu.
3. Click and drag the red box to the desired area to zoom. The zoomed image will be magnified by 4x. A sample of this can be seen in Figure 3-2.

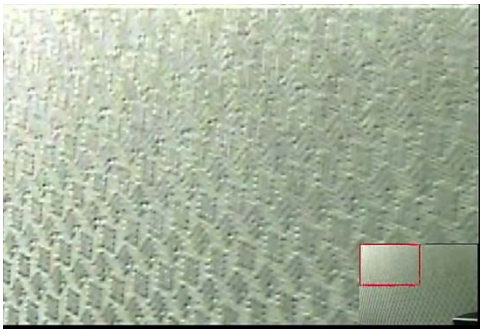


Figure 3-2 Digital Zoom

## 3.6 Configuring Live Preview Displays

Live Preview displays can be customized to your own needs. These settings can be accessed by entering the Display Settings menu.

Figure 3-3 Display Settings

**To access the Display Settings menu:**

1. Click the MENU button.
2. Click the Settings icon.
3. Click the Display icon.

**The settings available in this menu include:**

- **Video Output:** Designates the output to be configured. Outputs include Main Vout and Spot Vout.
- **Mode:** Designates the display mode to be used for Live Preview (Spot out single pane only).
- **Dwell Time:** The time in seconds to dwell between switching of channels when **Start Auto-switch** is selected in Live Preview.
- **Camera Order:** The order of the cameras to be used in the selected display mode (See

***Setting* Camera Order**).

- **Enable Audio Output:** Enable/disable audio output for the selected video output.
- **Event Output Port:** Designates the output to show event video.
- **Event Dwell Time:** The time in seconds to show an event on-screen.

## 3.7 Setting Camera Order

Setting the camera order allows you to logically position cameras for more efficient monitoring of a location.

**Note**
Spot video out does not support screen division.

Figure 3-4 Camera Order Setting

**To set the camera order:**

1. Enter the Display Settings menu, shown in Figure 3-4 (Menu > Settings > Display).
2. Click Set next to Camera Order.
3. Select the display mode you would like to set the camera order for under **Mode**.
4. Using the up and down button at each display, select the camera you would like to set. Setting an 'X' means the camera will not be displayed.
5. Click OK to save live view layout and exit.

**Note**
Duplicate cameras are not allowed in the camera order.

# Chapter 4 Recording Settings

## 4.1 Configuring Recording Parameters

There are multiple ways to setup your TVR-LT for recording. They include setting up a recording schedule, triggering a recording by motion detection and/or a sensor alarm.

### 4.1.1 Initializing Record Settings

Before setting your TVR-LT up for recording, certain parameters should be configured first. The steps to configure these parameters are:

1. If you have not initialized a HDD either through the Setup Wizard or through HDD management, you must do so before proceeding.
2. Navigate to Menu > Settings > Record. You will be taken to the Record Settings menu, shown in Figure 4-1.

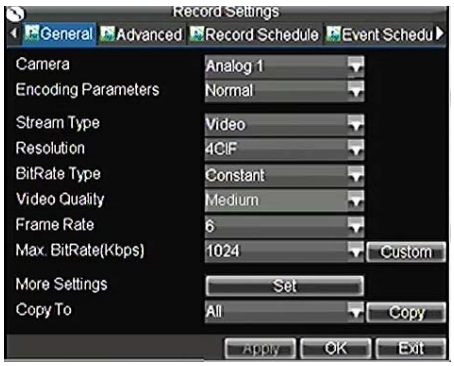



Figure 4-1 General Record Settings

3. Select the camera you would like to configure the settings for.

4. Configure settings for:
   - **Encoding Parameters:** Select the encoding parameters, either Normal or Event.
   - **Stream Type:** Type of stream to record, either video or video & audio.
   - **Resolution:** Select the resolution of the recording. The options include 4CIF, 2CIF, CIF and QCIF.
   - **Bit Rate Type:** Select either Variable or Constant bit rate.
   - **Video Quality:** Select the quality of the recording.
   - **Frame Rate:** Select the frame rate for the recording.
   - **Max Bit Rate:** Select or define custom maximum bit rate for recordings.

**Note**

When Stream Type is set to Video & Audio, the user must also enable the Record Audio option as shown in Point 5 below.

TVR-LT supports dual stream technology, which includes Main and Sub-streams. Both Normal and Event encoding parameters are Main stream type. Sub-stream may only be set via the TVR Remote Client or Web Client .

5. Click the Set button under **More Settings**. This will bring up another menu with further advanced recording options, as shown in Figure 4-2.

Figure 4-2 Additional Record Settings

6. Set additional Record Settings:
   • **Pre-Record:** Sets the time in seconds to record before the actual recording begins. Please note the pre-record time cannot be guaranteed. This will largely depend on the bit rate.
   • **Post-Record:** Sets the time in seconds to record after the actual event has ended.
   • **Data retention time:** Sets the expiration time in days (0-31) for recorded video. Recordings prior to this time are deleted. Setting the value to '0' disables this feature.
   • **Redundant Record:** Enable or disable redundant recording on a particular channel.
   • **Record Audio:** Enable or disable the recording of audio in addition to video.

**Note**
The Record Audio option is only available when the Stream Type is set to Video & Audio.

7. Click OK to finish and return to the previous menu.
8. Select the **Advanced** tab and this will open the **Advanced** settings menu, shown in Figure 4-3.
   • **HDD Overwrite:** Enable or disable the HDD Overwrite setting. Enabling the Overwrite setting will cause recorded files to be overwritten once the HDD is full.
   • **Export Player:** To include a basic version of the TVR Player with the exported video file, select [YES], otherwise set this option to [NO]. The exported version will only play proprietary TVR MP4 files, whereas the full version of the TVR Player included on the CD supplied with the device will also play converted AVI files, compatible with Windows Media Player and Quick Time.
   • **Existing Video (Days):** This indicates how many days' video is currently stored on the hard drive.
   **Recording Time (Days):** An estimate of how many days of video can be recorded and stored on the HDD, based on dynamic changes to recording settings and historical recording behavior.

9. Click Apply and then OK.

Figure 4-3 Advanced Record Settings

## 4.1.2 Scheduling a Recording

Scheduling a recording allows you to set up the TVR-LT to record only at certain times. There are two schedules for both Normal record and Event record.

**To setup a normal recording schedule:**

1. Enter the Record Settings menu (Menu > Settings > Record).
2. Select the **Record Schedule** tab to open the Schedule menu, shown in Figure 4-4.

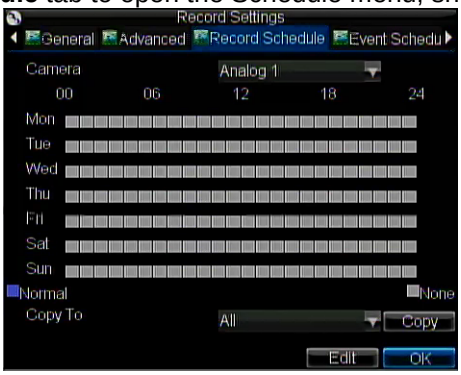



Figure 4-4 Record Schedule Settings

3. Select the Camera to edit the schedule for.
4. Click Edit.
5. Select the **Enable Schedule** checkbox.
6. Select the day you would like to set up the schedule for or select All Week to record the entire week.
7. To record the entire day, check **All Day,** otherwise configure selected time periods only. Up to 8 time periods can be scheduled. It is important to note that time periods cannot overlap.
8. Click OK to finish configuration.
9. Repeat steps 3-9 for other cameras or copy settings from one schedule to the next under the **Copy To** section.
10. Click OK to finish and save the schedule settings.

**To set up an event recording schedule:**

1. Enter the Record Settings menu (Menu > Settings > Record).
2. Select the **Event Schedule** tab to open the Schedule menu, shown in Figure 4-5.

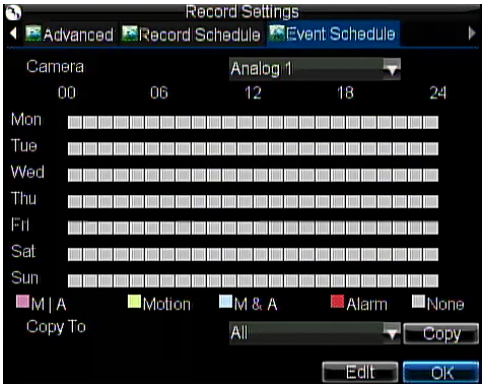



Figure 4-5 Event Schedule Settings

5. Select Camera to edit schedule for.
6. Click Edit.

5. Select the **Enable Schedule** checkbox.
6. Select the day you would like to setup the schedule for or select All Week to record the entire week.
7. To record the entire day, check **All Day,** otherwise configure selected time periods only. Up to 8 time periods can be scheduled. It is important to note that time periods cannot overlap.
8. Select recording **Type**. Recording type can be triggered by motion detection and/or alarm. Motion detected and alarm triggered recordings are further explained in **Configuring Alarms**.
9. Click OK to finish configuration.
10. Repeat steps 3-9 for other cameras or copy settings from one schedule to the next under the **Copy To** section.
11. Click OK to finish and save the schedule settings.

**Note**
**Event** encoding parameters will take effect when motion detection or alarm occurs. **Normal** encoding parameters will take effect when there are no events happening.

## 4.2 Protecting Recorded Files

There are two methods to prevent recorded files from being deleted off the HDD. It is highly recommended that important recorded events be protected from deletion. Recorded files can either be locked or the HDD that the files reside on can be set to read only.

### 4.2.1 Locking and Unlocking Recorded Files

**To lock or unlock a recorded file:**
1. Enter the Video Search menu by navigating to Menu > Video Search. The Video Search menu is shown in Figure 4-6.

Figure 4-6 Video Search Menu

2. Search for the desired recording by entering search parameters. Search parameters include Camera Number, Video/File Type, and Start/End Time.
3. Click Search. A list of recordings (similar to Figure 4-7), matching the search parameters will be displayed.

Figure 4-7 Video Search Result List

4. Select the file you would like to lock/unlock.
5. Click Lock to lock a file. If the file is already locked, click Unlock to unlock the file. Locked files will be shown with a closed lock symbol while unlocked files will display an opened lock symbol.
6. Click Cancel to exit the Video Search menu.

### 4.2.2 Setting HDD to Read-Only

**To set a HDD to read-only:**

1. Navigate to the HDD Management menu by going to Menu > HDD. The HDD Management menu is shown in Figure 4-8.

Figure 4-8 HDD Management Menu

2. Select the **General** tab.
3. Select the HDD to set to read-only.
4. Click Property. This will take you to the Property Settings menu, shown in Figure 4-9.

Figure 4-9 HDD Property Settings Menu

5. Set the HDD Status to Read-Only.
6. Click OK to save settings.

**Note**

When a HDD is set to read-only, no more recordings can be written to the disk. In order to enable recordings on that particular disk again, you must set the HDD to R/W (Read/ Write) in the HDD Property Settings menu. If multiple HDDs are used, the TVR-LT will automatically record to the next HDD that is not set to read-only.

# 4.3 Configuring Advanced HDD Settings

## 4.3.1 Setting up HDD Redundancy

To defend against unexpected failures of hard disk drives, it is recommended to set up HDD redundancy. It is important to note that in order to set up HDD redundancy, you will need more than one HDD in your TVR-LT.

**To set up HDD redundancy:**

1. Navigate to the **HDD Management** menu by clicking Menu > HDD.
2. Click on the General tab.
3. Select the HDD to be used for redundancy, as shown in Figure 4-10.

Figure 4-10 HDD Management Menu

4. Click Property. This will take you to the Property Settings menu.
5. Set **HDD Status** to Redundancy, shown in Figure 4-11. Ensure that at least one other HDD is set to R/W (read/write).
6. Click OK to save settings and return to the previous menu.

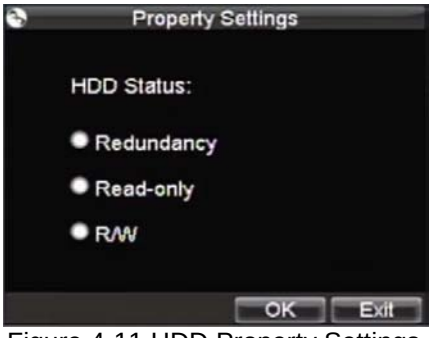



Figure 4-11 HDD Property Settings

7. Navigate to the Record Settings menu by clicking Menu > Settings > Record Settings.
8. Click on the General tab.
9. Select the Camera to be used for redundancy.
10. Next to More Settings, click Set. This will bring up additional settings for the selected camera (shown in Figure 4-12).

Figure 4-12 Additional Record Settings

11. Set **Redundant Record** to Yes.
12. Click OK to save settings.
13. Repeat steps 8-12 for other cameras you would like to configure for redundant recording.

# Chapter 5 Playback

## 5.1 Playing a Recording

You must first search for recordings to play them back. There are multiple ways to search for recordings, including searching for them by time, by channel, by file type and by log.

### 5.1.1 Understanding the Playback Interface

There are various controls on the Playback interface that make viewing recordings more efficient. A screenshot of the Playback interface is shown below in Figure 5-1.

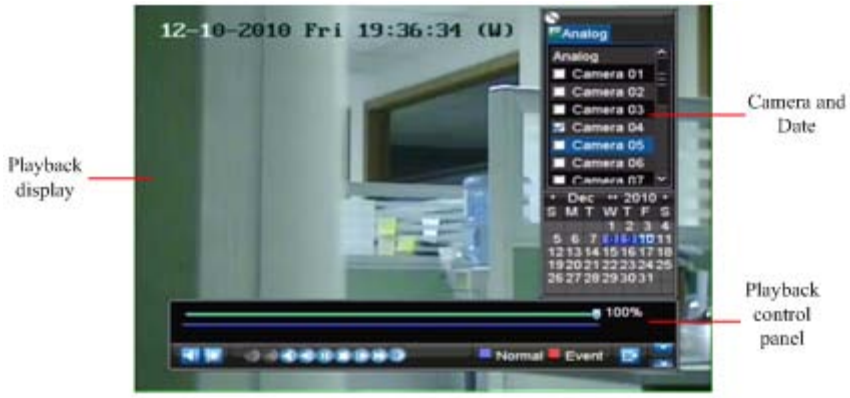



Figure 5-1 Playback Interface

The Playback Control Panel, shown in Figure 5-2 contains the various controls on the Playback interface.

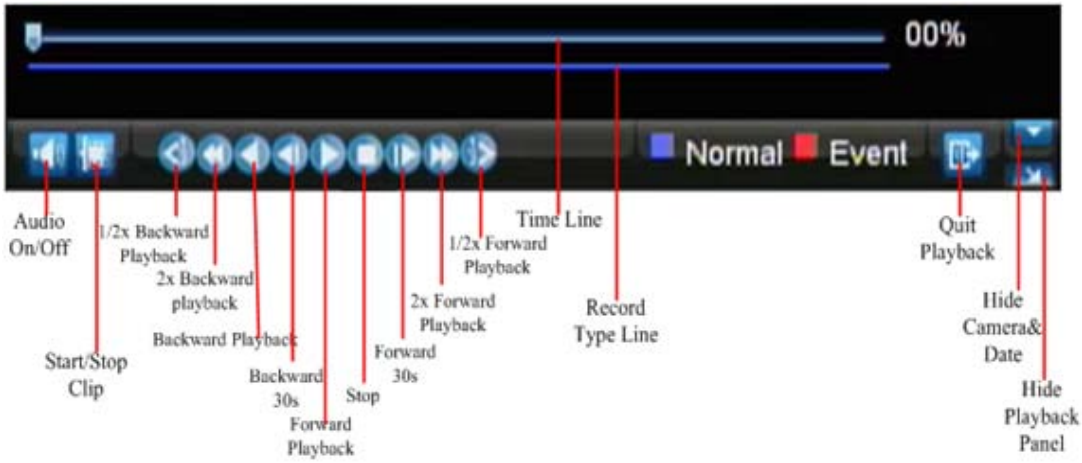



Figure 5-2 Playback Control Panel

**Note**

The blue record time line designates schedule recording while the red timeline shows event recordings.

## 5.1.2 Playing Back from Search

**To play back files from a video search:**

1. Enter into the Video Search menu by clicking Menu > Video Search.
2. Set the search parameters by selecting cameras to search, Video/File Type and the Start/End Time (as shown in Figure 5-3).

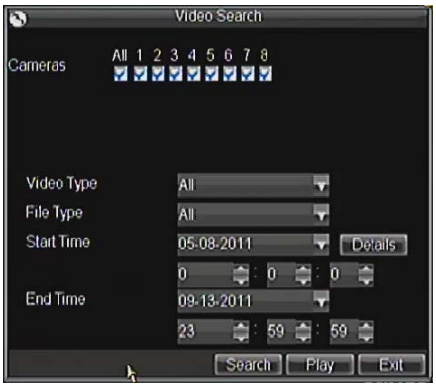



Figure 5-3 Video Search Menu

3. Click Play to start playback of all the files found with the specified search criteria or click Search to bring up the list of search results, shown in Figure 5-4. After search results are presented, select the file you would like to play back and click Play.

Figure 5-4 Video Search Result

4. Recordings will automatically be played back in the Playback interface, shown in Figure 5-5.

Figure 5-5 Playback Interface

## 5.1.3 Playing Back from Live Preview

You may also instantly playback from a channel while watching a Live Preview. The playback will begin from the earliest recording of that day.

**To playback from a channel instantly in Live Preview:**

**Using a Mouse:**

1. Right-click the mouse on live preview mode and click Instant Playback.
2. Select the desired channels and date, and then click Play. Recordings from the selected channel will start playing back in the Playback interface. A message will appear if there are no recordings found.
3. You may also select additional channels for playback from the channel list on the right-hand side of the Playback interface, as shown in Figure 5-6.

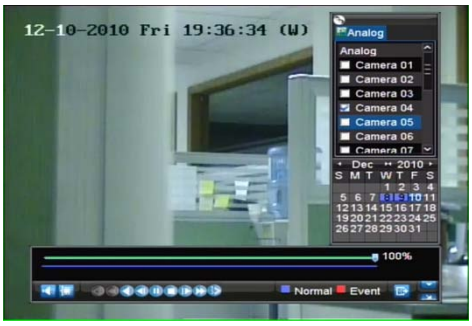



Figure 5-6 Playback Interface

**Using the Front Panel/Remote:**

1. Press the PLAY button. This will take you into the Playback interface.
2. Enter the channel you would like to watch recordings for on the front panel or using the remote (i.e. press '4' for channel 04).
3. Recordings will begin for the selected channel.

**Note**

1. The Previous File and Next File button will change to Previous camera and Next Camera buttons.
2. Right-clicking the mouse on live preview mode and clicking Playback will bring you to the playback interface. It is then necessary to select which camera to play back.

## 5.1.4 Playing Back from System Log

You may also play back recordings from the System Log.

To play back video from the System Log:

1. Enter the Log Search menu by clicking Menu > Maintenance > Log Search (shown in Figure 5-7).

Figure 5-7 Log Search Menu

2. Set the **Major Type** setting to Information.
3. Set the **Minor Type** setting to Start Record or End Record.
4. Set **Start Time** and **End Time**.
5. Click Search.
6. A list of results with your search criteria will be returned. Select the video log to playback and click Play.
7. The recording will begin to play in the Playback interface.

## 5.1.5 Playing Back Frame-by-Frame

To playback frame-by-frame in the Playback interface:

**Using a Mouse:**
1. Click Slow Forward on the Playback Control Panel until the speed changes to Single frame.
2. Click Slow Forward to advance the video frame by frame.

**Using the Front Panel/Rem*ote:***
1. Rotate the inner control on the Jog Shuttle counterclockwise or press the Down button to set the play to Single frame.
2. Press the OK button.
3. Press the Down button to advance the video frame by frame.

## 5.1.6 Reverse Playback

**To reverse playback in the Playback interface:**
1. Select the desired channel and date, click on the progress bar to choose the start time.
2. Click Reverse Playback on the Playback Control Panel to execute reverse playback from start time.
3. Click Slow or Fast Reverse to adjust reverse playback speed.

**Note**
The reverse playback feature only supports a single channel.

## 5.2 Using Digital Zoom

**To use digital zoom in Playback mode:**

1. Enter Digital Zoom mode by right-clicking in Playback and selecting Zoom.
2. Click and drag the red box for the desired magnification area, as shown in Figure 5-8. The selected area will be zoomed to full screen.

Figure 5-8 Digital Zoom Area Selection

# Chapter 6 Backup

## 6.1 Back up Recorded Files

Recorded files can be backed up to various media, such as USB flash disks, USB hard drives or a DVD writer.

### 6.1.1 Exporting Files

**To export recorded files:**

1. Enter the Export Video menu (shown in Figure 6-1) by clicking Menu > Video Export.

Figure 6-1 Export Video Menu

2. Select the desired parameters to search for files to export.
3. Click Export. This will take you to the Video Search menu.
4. Select the files to export, as shown in Figure 6-2. You may also click Play to verify that these files are indeed the ones you would like to export.

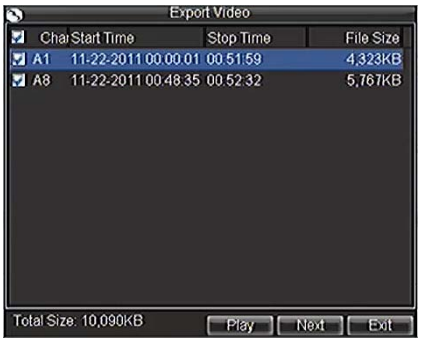



Figure 6-2 Video Search Results

5. The size of the currently selected files is displayed in the lower-left corner of the window. Select the Next button to enter the Export menu, shown in Figure 6-3.

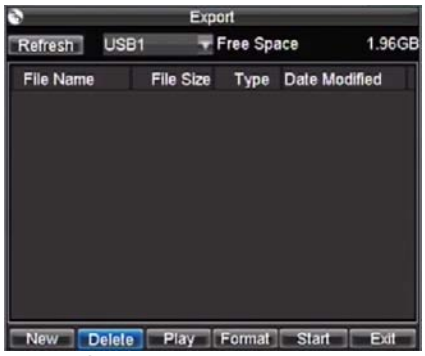


Figure 6-3 Export Menu

6. Select the target device for the export from the drop-down list (USB Flash Drive, USB HDD, DVD Writer). If the backup device is not recognized:
   • Click the Refresh button.
   • Reconnect the device.
   • Check device compatibility with the vendor if necessary.
7. Click Start to begin the backup process, shown in Figure 6-4.

Figure 6-4 Backup Progress

8. After the backup process has completed (Figure 6-5), you may select the files from your device and click Play to verify that it has been exported successfully.

Figure 6-5 Export Successful Screen

**Note**
Video Player software will only be copied on to the target device if the **Export player** option is enabled. (See **Initializing Record Settings**)

## 6.1.2 Exporting Video Clips

You may also select video clips to export directly during Playback. A maximum of 30 clips can be selected for each channel.

**To export video clips during Playback:**
**Using the Mouse:**

1. Enter into the Playback interface (See **Playing Back a Recording**).
2. Using the Clip Start/Stop button in the Playback Control Panel, select the start and end of the video clip during playback.
3. Repeat for additional clips.
4. Click Quit Playback to exit from the Playback interface. You will then be prompted to save the clips, as shown in Figure 6-6.

Figure 6-6 Video Clips Save Prompt

5. Click Yes to enter the Backup interface or click No to exit to the Playback interface.
6. At the Backup interface, click Start to begin the Backup process.

**Using the Front Panel / Remote:**

1. Enter into the Playback interface (See **Playing Back a Recording**).
2. During playback, press the EDIT button to mark start of clip.
3. Press the EDIT button again to mark end of clip.
4. Repeat for additional clips.
5. Press the ESC button to exit from the Playback interface. You'll then be prompted to save the clips, as shown in Figure 6.
6. Click Yes to enter Backup interface or click No to exit to Playback interface.
7. In the Backup interface, click Start to begin the Backup process.

## 6.1.3 Managing Backup Devices

To manage backup devices, you must first be in the Export menu, shown in Figure 6-7. The Export menu can be accessed by following the steps shown in the previous section (See **Exporting Files**).

Figure 6-7 Export Menu

**Once in the Export menu, you may:**

- **Create New Folder:** Creates a new folder on the export device.
- **Delete:** Delete a file or folder from the export device.
- **Play:** Play the selected video file from the export device.
- **Format:** Format the export device.

# Chapter 7 Alarm Settings

## 7.1 Configuring Alarms

### 7.1.1 Setting up Motion Detection

Using motion detected recording will increase the number of days your TVR-LT is able to record. It will only record relevant events rather than recording everything, making searching for an event easier.

**To set up motion detection:**

1. **Enter Camera Settings:**
   Enter the Camera Settings interface by navigating to Menu > Settings > Camera. Select the channel to configure for motion detection.

2. Select the **Advanced** tab to open up the Advanced Camera Settings menu, shown in Figure 7-1.

Figure 7-1 Advanced Camera Settings

3. Select the Motion Detection checkbox.
4. Click the Area Settings button to enter the Motion Detection area and Sensitivity configuration interface.
5. The Motion Detection area, shown in Figure 7-2, allows you to mask out areas where you wish to detect motion. The whole screen or part of the screen may be selected.

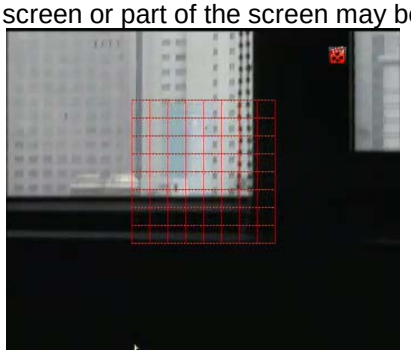


Figure 7-2 Motion Detection Area

6. Set the Motion Detection Sensitivity by right- clicking the mouse, shown in Figure 7-3. The higher the value, the higher the sensitivity.

Figure 7-3 Motion Sensitivity Setting

7. Click Exit to return to the Camera Settings menu.
8. Click Handle to open the Exception Handle menu, shown in Figure 7-4. Select the Triggered Camera tab

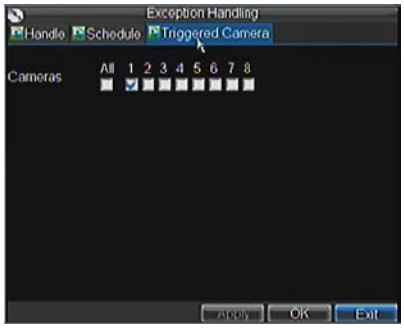


Figure 7-4 Triggered Camera Menu

9. Select which cameras to trigger for recording when motion is detected by checking the checkboxes under the desired cameras.
10. Select the Schedule tab and set the schedule for motion detection, shown in Figure 7-5. Motion detection only takes effect during the schedule time.

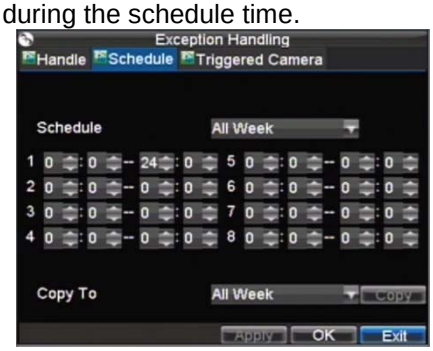


Figure 7-5 Video motion detection schedule

11. Click Apply to save schedule.
12. Select the Handle tab and choose handle methods for motion detection, shown in Figure 7-6. Handle options are further explained in the next section (See **Understanding Exception Trigger Options**).

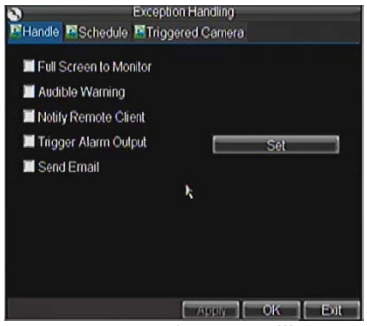


Figure 7-6 Exception Handling Menu

**13.** Click OK to complete motion settings for the selected camera.

You may now add a schedule to start recording when motion is detected (See **Scheduling a Recording**).

## 7.1.2 Setting up Video Tamper

**To set up video tamper:**

1. **Enter Camera Settings:**
   Enter the Camera Settings interface by navigating to Menu > Settings > Camera. Select the channel to configure for motion detection.

2. Select the **Advanced** tab to open up the Advanced Camera Settings menu, shown in Figure 7-7.

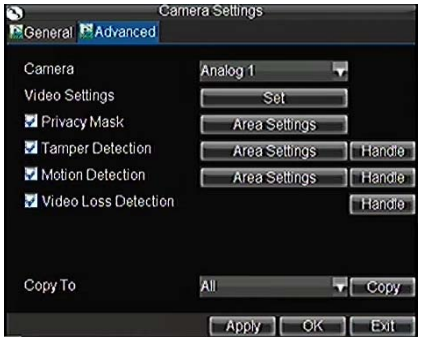


Figure 7-7 Advanced Camera Settings

3. Select the Tamper Detection checkbox.
4. Click Area Settings to enter the Tamper Detection area and Sensitivity configuration interface.
5. The Tamper Detection area, shown in Figure 7-8, allows you to mask out areas where you would like tampering to be detected. The whole or part of the screen may be selected.

Figure 7-8 Video Tamper Detection Area

**9.** Set the Tamper Detection Sensitivity by right-clicking the mouse, shown in Figure 7-9. The higher the value, the higher the sensitivity.

Figure 7-9 Motion Sensitivity Setting

**10.** Click Exit to return to the Camera Settings menu.
**11.** Select the Schedule tab and set the schedule for video tamper detection, shown in Figure 7-10. Tamper Detection only takes effect during the scheduled time.

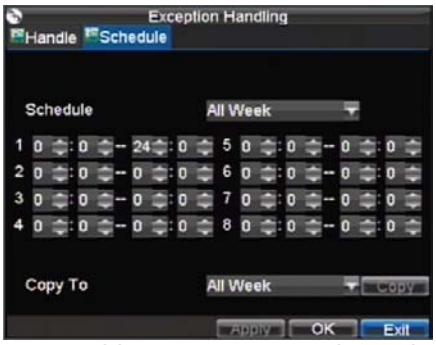



Figure 7-10 Video Tamper Detection Schedule

**12.** Click Apply to save schedule.
**13.** Select the Handle tab and choose handle methods for motion detection, shown in Figure 7-11. Handle options are further explained in the next section (See **Understanding Exception Trigger Options**).

Figure 7-11 Exception Handling Menu

**14.** Click OK to complete tamper settings for the selected camera.

## 7.1.3 Setting up Sensor Alarms

Recordings can also be triggered from an external sensor alarm device.

**To set up sensor alarms:**

**1.** Enter the Alarm Management menu by navigating to Menu > Settings > Alarm, shown in Figure 7-12.

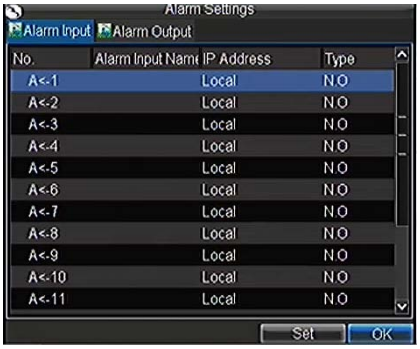



Figure 7-12 Alarm Management Menu

**2.** Select the **Alarm Input #** and click Set. This will open the Alarm Input Setting menu, shown in Figure 7-13.

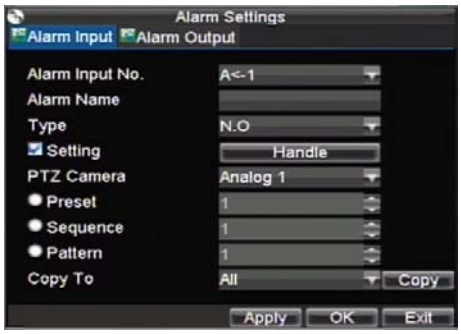



Figure 7-13 Alarm Management Settings

**3.** Set the alarm input type under **Type**. The options available are Normally Opened (N.O.) and Normally Closed (N.C.).

**Note**

Changing the alarm input type requires a system reboot.

4. Select the **Settings** checkbox and click **Handle** to enter the Alarm Input Handle menu.
5. Select the **Triggered Camera** tab.
6. Select which cameras to trigger for recording when an alarm occurs by selecting the checkboxes under the desired cameras, as shown in Figure 7-14.

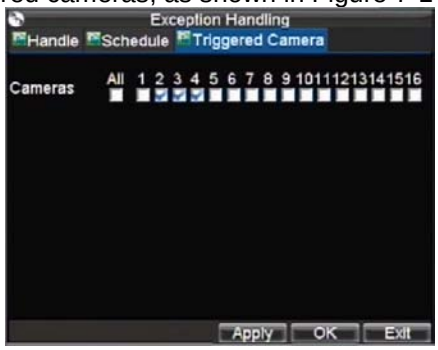



Figure 7-14 Triggered Cameras Menu

7. Select the Schedule tab and set the schedule for Alarm In handle, shown in Figure 7-15.

Figure 7-15 Alarm In schedule

8. Click Apply to save the schedule.
9. Select the Handle tab and choose handle methods for Alarm In, shown in Figure 7-16. Handle options are further explained below (See **Understanding Exception Trigger Options**).

Figure 7-16 Exception Handle Menu

10. Click OK to complete setup.

You may now add a schedule to start recording when an alarm is triggered (See **Scheduling a Recording**).

**Note**
It is important to note that you must click EDIT on either the remote or the front panel on a text field before being able to edit its content. After entering text, you must hit click ENTER to be able to move on to the next field.
Alarm outputs may also be configured in the Alarm Management menu.

**To set up Alarm Output:**
1. Select the **Alarm Output** tab. This will bring up the Alarm Output interface, shown in Figure 7-17.

Figure 7-17 Alarm Output Interface

2. Select the output you would like to configure and click Set. This will bring up the settings page for the selected channel (Figure 7-18).

Figure 7-18 Alarm Output Settings

3. Configure the settings for the selected output.
4. Click OK to save and exit.

**Note**
If the **Duration** option is selected as *Manually Stop*, the alarm will only stop when you manually stop it (See **Triggering Alarm Outputs Manually**).

## 7.2 Triggering Alarm Outputs Manually

You may also trigger alarm outputs manually through the Manual Alarm menu.

**To trigger alarm outputs manually:**
1. Enter the Manual Alarm menu (Figure 7-19) by clicking Menu > Manual Alarm.

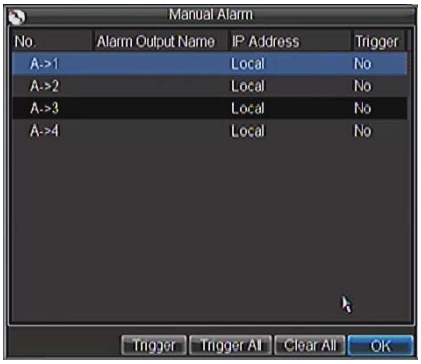



Figure 7-19 Manual Alarm Menu

2. In the Manual Alarm menu, you may:
   • **Trigger:** Select an alarm from the list and click Trigger to trigger its output.
   • **Trigger All:** Trigger all alarm outputs at once.
   • **Clear All:** Stop all alarm outputs at once.
3. Click OK to return to the previous menu.

## 7.3 Detecting Video Loss

Your TVR-LT can be set up to detect video loss and trigger an action. To set up video loss detection:

**To set up video loss detection:**

1. **Enter Camera Setting:**
   Enter the Camera Settings interface by navigating to Menu > Settings > Camera. Select the channel to configure for video loss detection.
   Select the **Advanced** tab to open up the Advanced Camera Settings menu, shown in Figure 7-20.

Figure 7-20 Advanced Camera Settings

2. Click Handle next to Video Loss Detection.
3. Select the Schedule tab and set the schedule for Video Loss, shown in Figure 7-21.

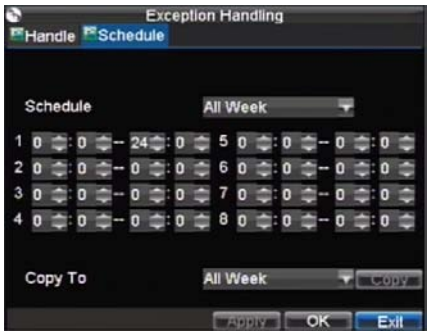



Figure 7-21 Video Loss Detection schedule

4. Click Apply to save schedule.
5. Select the Handle tab and choose handle methods for video loss, shown in Figure 7-22. Handle options are further explained below (See **Understanding Exception Trigger Options**).

Figure 7-22 Exception Handle Menu

6. Click OK to complete motion settings for the selected camera.

**Note**

The Stop recording option will stop recording whenever video loss occurs if it is enabled. It takes effect regardless of whether the video loss schedule is configured. The main advantage of this feature is that if a channel is unused and has no video input or a channel loses its existing video input then the TVR-LT does not continue recording blank video on the hard drive. Resumption of recording is automatic when video is re-applied to the channel, provided the channel has previously been configured to record.

## 7.4 Setting Exception

Setting exceptions allows the TVR-LT to alert you when irregular events occur. These events include:

- **HDD Full:** All installed HDDs are full.
- **HDD Errors:** Errors occurred during writing of the HDD or HDD has failed to initialize.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Conflict in IP address setting.
- **Illegal Login:** Wrong user ID or password used.
- **Video Exception:** Unstable video signal detected.
- **Video Output Standard Mismatched (PAL/NTSC):** Camera video standard does not match with TVR-LT CVBS video output standard.

**To set exceptions:**

1. Enter the Exception menu by clicking Menu > Settings > Exception.
2. Select the exception to configure under **Exception Type**.
3. Select triggering options, as shown in Figure 7-23. Trigger options are further explained in the next section (See **Understanding Exception Trigger Options**).

Figure 7-23 Exception Menu

4. Click OK to save and exit Exception menu.

## 7.5 Understanding Exception Trigger Options

When setting up exception handlers for such features as motion detection and sensor alarms, you may select triggering options to alert you to these exceptions.

The triggering options that you may select include:

• **Full Screen to Monitor:** When an alarm is triggered, the local monitor (VGA or BNC monitor) will display an image under Live Preview mode. This alarm can be configured under the Popup Alarm Image handle method. For alarms that are triggered simultaneously, images will be displayed one at a time every 10 seconds (default dwell time). A different dwell time can be set by going to Menu > Settings > Display > Dwell Time. Once the alarm stops, cycling of the images will also stop and you'll be returned to the Live Preview screen.

• **Audible Warning:** Trigger an audible beep when exception is detected.

• **Notify Remote Client:** Sends a signal to remote alarm host when exception is detected (See **Configuring a Remote Alarm Host**).

• **Trigger Alarm Output:** Trigger an alarm output when exception is detected. Alarm output can be configured by following the steps listed in **Setting Up Sensor Alarms.**

• **Send Email:** Send Email to appointed email address when an alarm is triggered or exception is detected. Email can be configured by following the steps listed in **Email setting.**

# Chapter 8 Network Settings

Network settings must be configured before you're able to use your TVR-LT over a network.

## 8.1 Configuring Basic Settings

**To configure basic network settings:**

1. Enter the Network Settings menu, shown in Figure 8-1 by clicking Menu > Settings > Network.

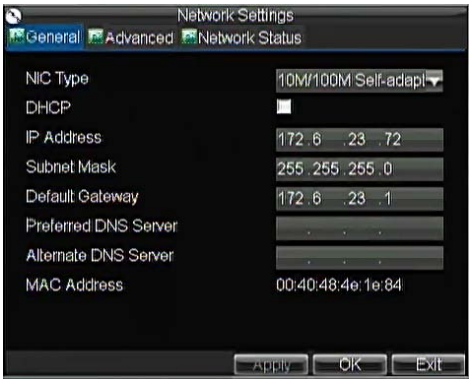



Figure 8-1 Network Settings Menu

2. Select the **General** tab.
3. If you have a DHCP server running and would like your TVR-LT to automatically obtain an IP address and other network settings from that server, select the **DHCP** checkbox. You may check the DHCP status by going to the **Network Status** tab, as shown in Figure 8-2.

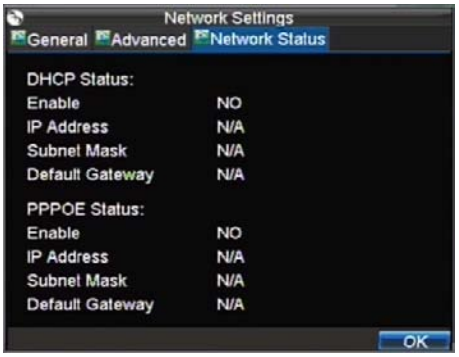



Figure 8-2 Network Status

4. If you would like to configure your own settings, enter the settings for:
   - **IP Address:** IP address you would like to use for your TVR-LT.
   - **Subnet Mask:** Subnet Mask of network.
   - **Default Gateway:** IP address of your Gateway. Typically the IP address of your router.
   - **Preferred/Alternate DNS Server:** The preferred and alternate Domain Name System (DNS) Server to be used with your TVR-LT.
5. Click OK to save and exit the Network Settings menu.

## 8.2 Configuring PPPoE Settings

Your TVR-LT also allows for Point-to-Point Protocol over Ethernet (PPPoE) access. To set up PPPoE access:

1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab. This will take you to the advanced Network Settings menu, shown in Figure 8-3.

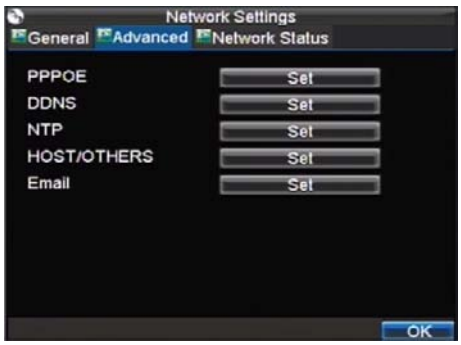



Figure 8-3 Advanced Network Settings

3. Click Set next to **PPPoE** to enter the PPPoE settings menu, shown in Figure 8-4.

Figure 8-4 PPPoE Settings

4. Select the **PPPoE** checkbox to enable feature.

5. Enter **User Name**, **Password**, and **Confirm Password** for PPPoE access. PPPoE credentials can be obtained from your network administrator. Once the setup is completed, your TVR-LT will automatically dial-up into your network after rebooting.

6. Click OK to save and exit the Network Settings menu. You may now restart your TVR-LT for settings to take place. To check on the status of your PPPoE connection, go to Menu > Settings > Network and select the **Network Status** tab.

## 8.3 Configuring DDNS

If your TVR-LT is set up to use PPPoE as its default network connection, you may also set up Dynamic DNS (DDNS).

**To set up DDNS:**

1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab.
3. Select the Set button next to **DDNS** to enter the DDNS settings menu, shown in Figure 8-5.

Figure 8-5 DDNS Settings Menu

4. Select the **DDNS** checkbox to enable the feature.
5. Select **DDNS Type**. There are three different DDNS types to choose from, IpServer, PeanutHull and DynDNS.
   • **IpServer:** Enter **Server Address** for IpServer.
   • **PeanutHull:** Enter **User Name** and **Password** obtained from the PeanutHull website (Figure 6).
   • **DynDNS:** Enter **Server Address** for DynDNS (i.e. members.dyndns.org) (Figure 8-6). In the **Server Address** field, enter the domain obtained from the DynDNS web site. Finally, enter the **User Name** and **Password** registered in the DynDNS network.

Figure 8-6 DynDNS Settings

## 8.4 Configuring an NTP Server

A Network Time Protocol (NTP) Server may also be set up on your TVR-LT to keep the date and time current and accurate.

**To set up an NTP server:**

1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab.

3. Click Set next to **NTP** to enter the NTP settings menu, as shown in Figure 8-7.

Figure 8-7 NTP Settings Menu

4. Select the **NTP** checkbox to enable feature.
5. Set NTP settings:
   - **Synchronize Every:** Interval in minutes to synchronize with NTP server.
   - **NTP Server:** IP address of the NTP server.
6. Click OK to save and exit menu.

**Note**

Time synchronization interval has a range of 0-10080ms, normally 7200ms. If the TVR-LT is used on a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44).

## 8.5 Configuring a Remote Alarm Host

With a remote alarm host set, the TVR-LT will send a signal to the host when an alarm is triggered. The remote alarm host must have the Network Video Surveillance software installed.

**To set up a remote alarm host:**

1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab.
3. Click Set next to **Host/Others** to enter the Host/Others menu, as shown in Figure 8-8.

Figure 8-8 Host/Others Menu

4. Enter the **Remote Alarm Host IP** and **Remote Alarm Host Port**. Alarm Host IP is the IP of the remote PC which has the TVR-LT Remote Client software installed. The Alarm Host Port must be the same as the software's alarm monitor port (default port is 7200).

## 8.6 Configuring Multicast

Setting up multicasting solves limitation issues when streaming video through a network access device. A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. It is suggested that the IP address range of 239.252.0.0 to 239.255.255.255 be used.

**To set up multicasting:**

1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab.
3. Click Set next to **Host/Others** to enter the Host/Others menu.
4. Set **Multicast IP**, as shown in Figure 8-9. When adding a device to the TVR-LT remote client software, the multicast address must be the same as the TVR's multicast IP.

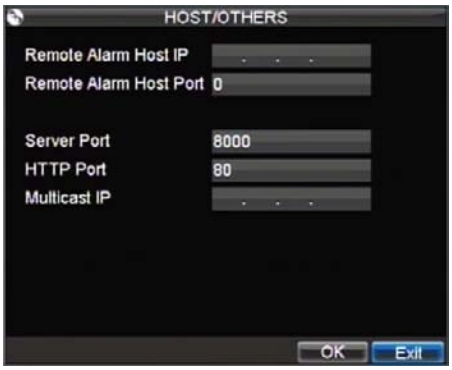



Figure 8-9 Host/Others Menu

5. Click OK to save and exit menu.

**Note**

A number of connections can be obtained for a given TVR-LT when using two or more Remote Clients connected to the same unit. The multicast IP can be used to solve this problem. The individual Remote Clients on the separate PCs are then linked via the multicast IP address.
Under the Multicast method, TVR-LT only sends the data to one special multicast IP address. The clients connected to the TVR-LT can obtain video data from the multicast IP address but not from TVR-LT directly.
To use multicast, ensure that the switch of your LAN supports the multicast method, then input a multicast IP address into the TVR-LT. Add the TVR-LT details to the Remote Client software and modify the information for each channel to adopt the MCAST protocol. (Please refer to Remote Client User Guide 4.2 and 4.3 for further details).
The Multicast method does not support either Intranet or Internet protocols.

## 8.7 Configuring Server and HTTP Ports

If you would like to change the server and HTTP ports from the default settings, you can do so in the Network Settings menu. The default server port is 8000 while the default HTTP port is 80.

**To change the default ports:**

1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab.
3. Click Set next to **Host/Others** to enter the Host/Others menu.

4. Enter the new **Server Port** and **HTTP Port**, as shown in Figure 8-10.

Figure 8-10 Host/Others Menu

**Note**
The Server Port has a port range of 2000-65535 and is used for Remote Client software access. The HTTP port is used for remote internet browser access.

## 8.8 Configuring E-mail Settings

**To configure E-mail settings:**
1. Enter the Network Settings menu by clicking Menu > Settings > Network.
2. Select the **Advanced** tab.
3. Click Set next to **E-mail** to enter the E-mail menu. The E-mail menu is shown in Figure 8-11.

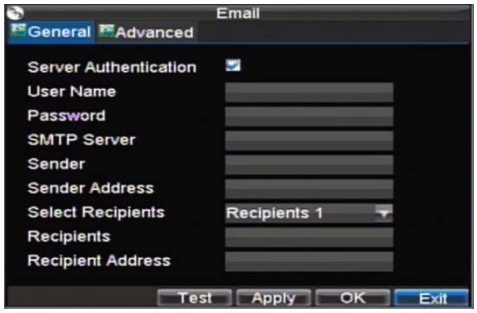



Figure 8-11 E-mail Settings Menu

4. Enter e-mail settings. Please refer to Figure 8-11 for details.
5. Click Test to test e-mail settings.
6. Select the **Advanced** tab to enable Attached JPEG File if you want to send email with alarm images. The interval is the time of two adjacent alarm images. You can also set the SMTP port and enable SSL here.
7. Click OK to save and exit the E-mail menu.

**Note**
It is recommended that the e-mail settings be tested after they are entered. This can be accomplished by clicking Test in the E-mail menu.

# Chapter 9 PTZ Controls

## 9.1 Navigating PTZ Menus

PTZ menus can be navigated with either the mouse or the front panel/remote. For quick access to certain PTZ settings, right-clicking in a display while in PTZ control mode will bring up the PTZ settings menu. This menu is shown in Figure 9-1.

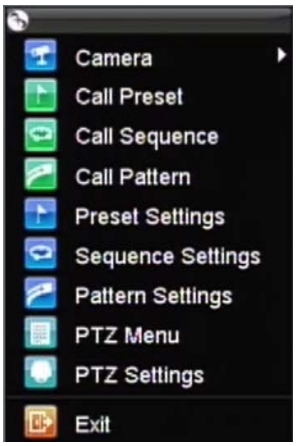



Figure 9-1 Mouse PTZ Settings Menu

**The items that can be found on this menu include:**

- **Camera:** Select a PTZ camera.
- **Call Preset:** Call a PTZ preset.
- **Call Sequence:** Call a PTZ sequence.
- **Call Pattern:** Call a PTZ pattern.
- **Sequence Settings:** Enter PTZ sequence configuration menu.
- **Pattern Settings:** Enter PTZ pattern configuration menu.
- **PTZ Menu:** Enter AD Ultra8 dome internal menu.
- **PTZ Settings:** Enter PTZ setting menu.

## 9.2 Configuring PTZ Settings

Settings for a PTZ camera must be configured before it can be used. Before proceeding, verify that the PTZ and RS-485 of the TVR-LT are connected properly.

**To configure PTZ settings:**

1. Enter the PTZ Settings menu by clicking Menu > Settings > PTZ. The PTZ Settings menu is shown in Figure 9-2.

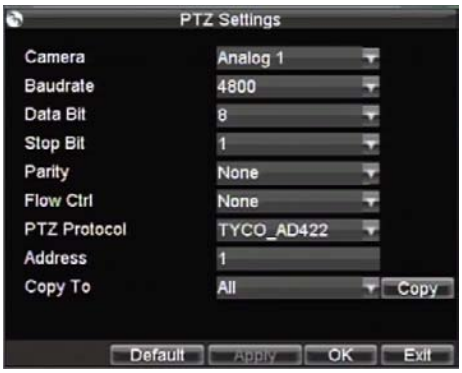



Figure 9-2 PTZ Settings Menu

2. Select the PTZ camera from the **Camera** dropdown.
3. Enter PTZ settings to match those of the PTZ camera.
4. Click OK to save and exit the menu.

(Please note that when using a PTZ dome, such as the AD Ultra 8 for example, which uses the AD422 PTZ protocol 4800 baud, it is necessary to reboot or power-up the camera after the PTZ settings have been entered in the TVR-LT PTZ menu. During the power-up operation the camera will detect the type of PTZ network it is connected to. An on-screen message over the camera's video will display "detecting network". During this time the user should click on one of the direction arrows shown in Figure 9-3 below. After about 30 seconds the network will be detected and display "EIA422". Continue to click on one of the direction arrows for a further 15 seconds and the camera should respond to the PTZ commands being sent.)

## 9.3 Setting PTZ Presets, Sequences & Patterns

Your TVR-LT allows you to customize presets, sequences and patterns for a connected PTZ camera.

### 9.3.1 Understanding PTZ Controls

Before setting presets, sequences and patterns, it is important to understand some of the features of the PTZ control panel, shown in Figure 9-3.

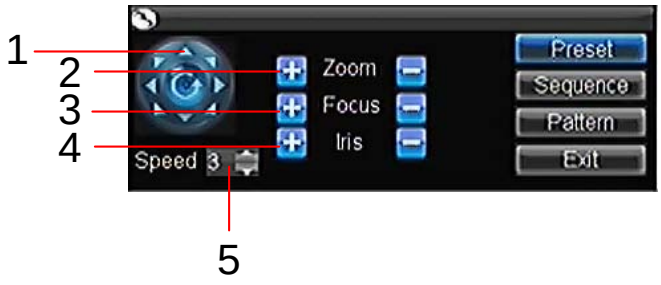



Figure 9-3 PTZ Control Interface

**The controls on the PTZ panel include:**

1. **Directional Pad/Auto-scan Buttons:** Controls the movement and direction of the PTZ. The function of the center button may differ for different cameras and PTZ protocols. For example with the AD Ultra 8 camera which uses the AD422 protocol, the center button will start and stop

the “Apple Peel” pattern.
2. **Zoom:** Used to zoom in and out with the PTZ.
3. **Focus:** Used to adjust the focus of the PTZ.
4. **Iris:** Used to open up or close the iris of the PTZ.
5. **Speed:** Adjusts the movement speed of the PTZ.

## 9.3.2 Customizing Presets

Presets can be set to direct your PTZ camera at a pre-determined location at the click of a button.

**To set up and use custom PTZ presets:**

1. Enter the PTZ Control interface, shown in Figure 9-3 by clicking PTZ in the mouse menu or the PTZ button on the front panel.
2. Click Preset to enter the Preset Management menu.
3. In the Preset Management menu, shown in Figure 9-4, you may:
   • **Configure Preset:** Use the PTZ control panel to adjust the position of the preset. Select a Preset number and click Set to save the preset location.
   • **Clear Preset:** Select a Preset number and click Clear to delete the preset. You may also click Clear All to delete all presets.
   • **Call Preset:** Select a Preset and click Call.

Figure 9-4 Preset Management Menu

**Note**
Only valid presets can be called and deleted.
The status (enabled / disabled) of a preset, sequence or pattern only indicate the editing status of the local GUI.

## 9.3.3 Customizing Sequences

Sequences can be set up to move the PTZ to different key points and have it stay there for a set duration before moving on to the next point. The key points are defined by presets which can be set following the steps above in **Customizing Presets**.

**To set up PTZ sequences when using the TYCO_AD422 protocol:**

Sequences can only be set up in the dome menu when using the TYCO_AD422 protocol.

1. Enter the PTZ Control interface, shown in Figure 9-3 by clicking PTZ in the mouse menu or the PTZ button on the front panel.
2. Enter the dome menu by clicking

in the mouse menu, shown in Figure 9-5

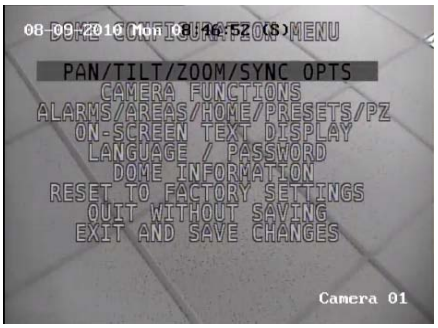



Figure 9-5

**3.** Click the and keys in the PTZ control panel to select ALARMS/AREAS/HOME/PRESETS/PZ, click Focus Out to confirm and enter Alarms/Areas/Home/Presets/PZ sub menu, shown in Figure 9-6

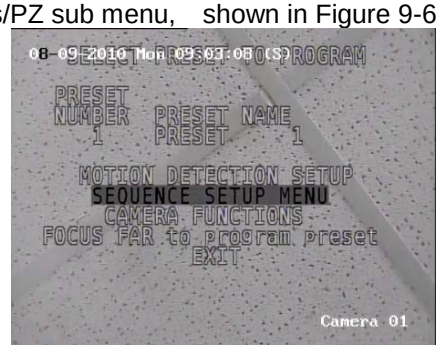



Figure 9-6

**4.** Select 'Sequence Setup Menu' to set up sequences, shown in Figure 9-7.

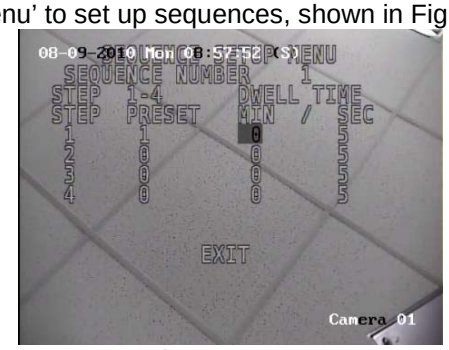



Figure 9-7

**Note**

An internal PTZ Menu is available for specific Speed Domes, such as the American Dynamics SpeedDome Ultra 8. Please consult your vendor for details. ;

Click the and keys in the PTZ control panel to move upwards and downwards and select options in the dome menu.

The Focus Out button acts as the Confirm button in the dome menu.

Click Zoom buttons in PTZ control panel to increase and decrease numbers in dome menu.

These sequences can then be called and stopped from the Sequence Management Menu, similar to the Preset Management Menu in Figure 9-4. However it will not be possible to call them by clicking the mouse or to select a sequence in the same way that is possible to select a configured preset.

**To set up PTZ sequences when using other protocols:**

Sequences are set up in the TVR-LT menu when using other protocols.

1. Enter the PTZ Control interface, shown in Figure 9-3 by clicking PTZ in the mouse menu or the PTZ button on the front panel.
2. Select the Sequence button to enter the Sequence Management menu.
3. In the Sequence Management menu, you may:

**Configure a Sequence:**

**1)** Select a **Sequence Number** to set.

**2)** Select valid presets (See **Customizing Presets**) and click Set to enter the Sequence configuration menu. A sequence should have at least 2 valid presets.

**3)** Set the **Preset No.**, **Duration**, and **Speed** (Figure 9-8). The **Preset No.** determines the order that the PTZ will follow while cycling through the sequence. The **Duration** refers to the time span to stay at the corresponding key point. The **Speed** defines the rate at which the PTZ will move from one key point to the next.

Figure 9-8 Sequence Configuration Menu

**4)** Click OK to return to the Sequence Management menu and repeat steps 2-3 to configure other key points.

**5)** After all key points have been configured, click OK to save and exit the menu.

**Clear Sequence:**

**1)** Select a valid **Sequence Number**.

**2)** Click Clear to delete a sequence.

**Call Sequence:**

**1)** Select a valid **Sequence Number**.

**2)** Click Start to call the sequence. Click Stop to stop the sequence.

## 9.3.4 Virtual Sequence

The TVR-LT has a virtual sequence capability for situations were the domes themselves do not support a sequence feature. The AD-422VS, Pelco-PVS and PelcoDVS protocols retain all the functionality of their respective base protocols, but also include the ability to create virtual sequences from presets stored in the dome. These are then called locally from the TVR-LT and may be set with user-defined dwell times in the same way as real sequences, as described in Section 9.3.3.

**Note**

Virtual sequences saved with any of the three virtual protocols are specific to that protocol and will cease to be valid when the user changes to any other non-virtual protocol like AD422.

A running virtual sequence will automatically stop as soon as the user manually interrupts with another PTZ operation, on any channel using any protocol.

When setting a virtual sequence, PTZ movement speed between presets cannot be defined by the

user.

## 9.3.5 Customizing Patterns

Patterns can be set up by recording the movement of the PTZ.

**To set up and use PTZ patterns:**

1. Enter the PTZ Control interface, shown in Figure 3 by clicking PTZ in the mouse menu or the PTZ button on the front panel.
2. Click Pattern to enter the Pattern Management menu, shown in Figure 9-9.

Figure 9-9 Pattern Management Menu

3. Select a **Pattern Number**.
4. To record a new pattern, click Run Record to start recording the movements of the PTZ. Use the PTZ control panel to move the PTZ. The PTZ movements will be recorded until the Stop Record button is clicked.
5. To run a pattern, click Run Pattern on a valid pattern. The PTZ will move according to the path that was defined until Stop Pattern is clicked.
6. Click OK to save and exit from menu.

# Chapter 10 Camera Management

## 10.1 Configuring OSD Settings

On Screen Display (OSD) settings can be configured in the Camera Management menu. The OSD is shown in each display during Live Preview mode and includes the time and date as well as the camera name.

**To configure OSD settings:**

1. Enter the Camera Management/Settings menu, shown in Figure 1 by clicking Menu > Settings > Camera.
2. Select the channel to setup OSD settings under **Channel #**.
3. Configure desired OSD settings, as shown in Figure 10-1.
4. Click Set next to **OSD Display Position**, adjust the position of the camera title and date/time, as shown in Figure 10-1.

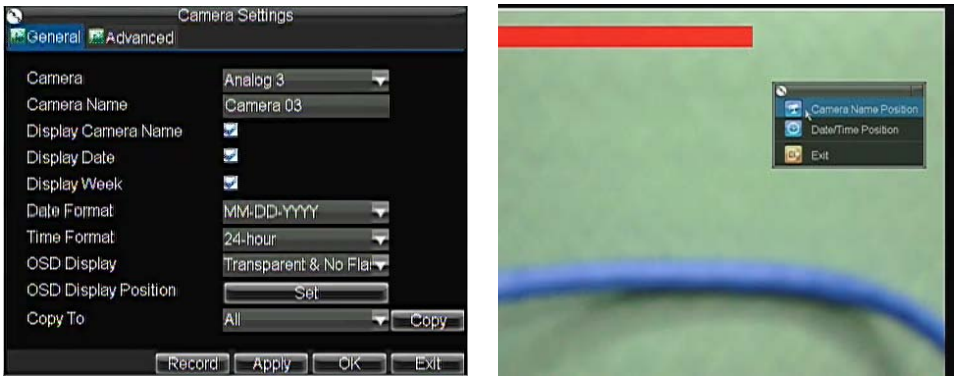



Figure 10-1 OSD Settings Menu

## 10.2 Setting up Privacy Mask

You may set up Privacy Mask to conceal sensitive or private areas from the field of view of a camera.

**To set up privacy mask:**

1. Enter the Camera Management/Settings menu, shown in Figure 1 by clicking Menu > Settings > Camera.
2. Select channel to setup privacy mask under **Channel #**.
3. Select the **Advanced** tab to enter the Advanced Camera Settings menu, shown in Figure 10-2.

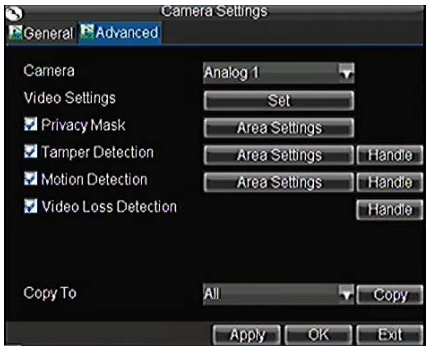



Figure 10-2 Advanced Camera Settings Menu

4. Select the **Privacy Mask** checkbox to enable the feature.
5. Click Area Settings to enter the Area Settings menu.
6. Define the Privacy Mask area, as shown in Figure 10-3. Up to 4 areas can be defined.

Figure 10-3 Setting Mask Area

7. Select OK to save and exit Mask setup.

## 10.3 Adjusting Display Settings

Display settings such as the brightness, contrast, saturation and hue can also be adjusted in the Camera Management menu.

**To adjust display settings:**

1. Enter the Camera Settings menu by clicking Menu > Settings > Camera.
2. Select the channel to adjust display settings under **Channel #**.
3. Select the **Advanced** tab to enter the Advanced Camera Settings menu, shown in Figure 10-4.
4. Click the Set button next to the Image Settings label.
5. Adjust the display settings, as shown in Figure 10-4. Brightness, contrast, saturation and hue can be adjusted. The display settings adjustments apply to recorded images as well as to previewed images.

Figure 10-4 Display Settings

# Chapter 11 HDD Management

## 11.1 Managing HDDs

### 11.1.1 Initializing HDDs

A newly installed hard disk drive (HDD) must be initialized before it can be used with your TVR-LT. Initializing the HDD will erase all data on it.

**To initialize a HDD:**

1. Enter the HDD Management menu, shown in Figure 11-1 by clicking Menu > HDD.

Figure 11-1 HDD Management Menu

2. Select HDD to initialize.
3. Click Initialized.
4. Click OK button to begin initialization. After the HDD has been initialized, the status of the HDD will change from Abnormal to Normal.

**Note**

A reboot is not required when a hard disk drive is re-formatted.

### 11.1.2 Setting HDD Groups

Your TVR-LT can separate multiple HDDs into groups. Videos from specified channels can be set to be recorded onto a particular HDD group.

**To setup a HDD group:**

1. Enter the HDD Management menu by clicking Menu > HDD.
2. Select HDDs to be added to group.
3. Click Group to enter Group Settings menu.
4. Set the **HDD Group Number**, as shown in Figure 11-2.

Group Settings
HDD Group Number:
1 2 3 4 5 6 7 8 9 10111213141516
Please set cameras for HDD group again after changing HDD group number.
OK
Exit

Figure 11-2 HDD Group Settings Menu

**5.** Click OK and exit menu.

**Note**
By default, all HDDs belong to group 1.

## 11.2 Setting HDD Status

You may change the behavior of your HDD by changing its status. The status of a HDD can be set to redundancy, read-only or read/write (R/W).

### 11.2.1 Setting HDD to Read-Only

A HDD can be set to read-only to avoid important recorded files from being overwritten when the HDD becomes full.

**To set a HDD to read-only:**
**1.** Enter the HDD Management menu by clicking Menu > HDD.
**2.** Select HDD to protect.
**3.** Click Property to enter the Property Settings menu, as shown in Figure 11-3.

Figure 11-3 HDD Property Settings Menu

**4.** Set **HDD Status** to **Read-Only**.
**5.** Click OK to save and exit menu.

**Note**
Once set to read-only, the HDD cannot be written to until it is set back to read/write (R/W). If the HDD that is currently being written to is set to read-only, the data will be recorded to the next HDD. If there is only one HDD present, setting it to read-only will cause the TVR-LT to not record.

### 11.2.2 Setting HDD to Redundancy

In order to use HDD redundancy on your TVR, you will need to have at least two disk installed.

Setting up HDD redundancy will allow your TVR-LT to record a copy of the videos onto multiple drives as a safeguard against losing files in case of disk failures.

**To setup HDD redundancy:**

1. Enter the HDD Management menu by clicking Menu > HDD.
2. Select HDD to set up redundancy on.
3. Click Property to enter the Property Settings menu, as shown in Figure 3.
4. Set **HDD Status** to **Redundancy**.
5. Click OK to save and exit the menu.

**Note**

The HDD that is set to redundancy is used to store an extra copy of the recording. If a HDD is set to redundancy, at least one HDD should be set to the R/W status.

## 11.2.3 Checking HDD Status

You may check the status of any of the installed HDDs on your TVR-LT at any time.

**To check the status of a HDD:**

1. Enter the HDD Management menu by clicking Menu > HDD.
2. The status of your HDD is listed under the **Status** column. If the status is listed as Normal or Hibernate, the HDD is in working order. If it is listed as Abnormal and has already been initialized, the HDD needs to be replaced. If the HDD is Uninitialized, you will need to initialize it before it can be used in your TVR-LT. Please refer to **Initializing HDDs** for further instructions.

You may also view the SMART information of installed HDDs. SMART, short for Self-Monitoring, Analysis and Reporting Technology is a monitoring system for hard disk drives to detect and report on various indicators of reliability with a view to anticipating any failure.

**To view SMART information of a HDD:**

1. Enter the Log Search menu, shown in Figure 11-4 by clicking Menu > Maintenance > Log Search.

Figure 11-4 Log Search Menu

2. Set **Major Type** to Information.
3. Set **Minor Type** to HDD SMART.
4. Enter **Start Time** and **End Time**.
5. Click Search to begin the Log search. A result list, similar to that in Figure 11-5 will be returned.

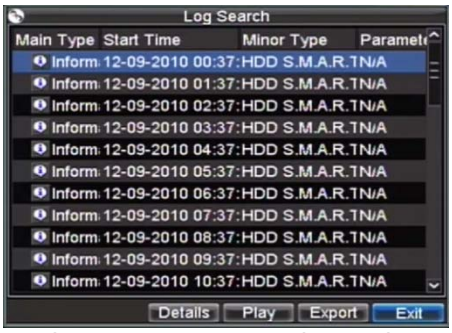


Figure 11-5 Log Search Results

**6.** Select the log item to view and click Details.

Figure 11-6 SMART Information

**7.** A detail listing of SMART information, as shown in Figure 11-6 will be displayed.

## 11.2.4 Configuring HDD Alarms

HDD alarms can be set to trigger when an HDD is uninitialized or in an abnormal state.

**To set HDD alarms:**

**1.** Enter the Exception menu, shown in Figure 11-7 by clicking Menu > Settings > Exception.

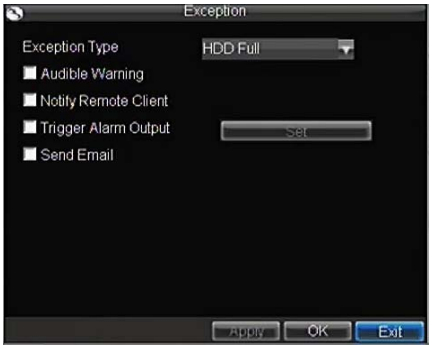


Figure 11-7 Exception Menu

**2.** Select HDD Error under **Exception Type**.

**3.** Select trigger action. Trigger actions are further explained in **Understanding Exception Trigger Options**.

# Chapter 12 TVR-LT Management

## 12.1 Configuring System Settings

### 12.2.1 Configuring General Settings

General settings such as the system language can be configured in the General Settings menu of your TVR-LT.

**To configure general settings:**

1. Enter the General Settings menu, shown in Figure 12-1 by clicking Menu > Settings > General.

Figure 12-1 General Settings Menu

2. Select the **General** tab.
3. Configure general settings. These settings include:
   - **Language:** Languages available: English, French, Simplified Chinese, German, Spanish, Italian, Portuguese (Brazilian) and Dutch.
   - **Video Standard:** Video output standard: NTSC and PAL.
   - **VGA Resolution:** VGA output resolution.
   - **Time Zone:** Time zone for use of TVR-LT.
   - **Menu Date Format:** Format to use for date.
   - **System Time:** System time and date.
   - **Mouse Sensitivity:** Speed of mouse pointer.
   - **Menu Password:** Enable/disable system password.

**Note**

If the video standard is different between the input and the output, you may notice flickering in Live Preview mode.

### 12.2.2 Configuring Advanced Settings

**To configure more advanced settings:**

1. Enter the General Settings menu, shown in Figure 12-1 by clicking Menu > Settings > General.
2. Click the **More Settings** tab; this will take you to the More Settings menu, shown in Figure 12-2.

Figure 12-2 More Settings Menu

**3.** Configure settings, including:
- **Device Name:** Name to use for TVR-LT.
- **Device Address:** Device number to use for TVR-LT.
- **Monitor Brightness:** CVBS Video output brightness.
- **Menu Transparency:** Menu transparency.
- **Menu Timeout:** Set timeout time for menu inactivity. For example, if timeout time is set to 5 minutes, after 5 minutes of inactivity in the General Settings menu, you will be returned to the Live Preview screen.
- **Monitor Scaling:** Enable/disable Main/Aux monitor icon on screen.

## 12.2.3 Configuring RS-232 Port Settings

**To configure RS-232 devices to be used with the TVR:**

**1.** Enter the RS-232 Settings menu by clicking Menu > Settings > RS232, shown in Figure 12-3.

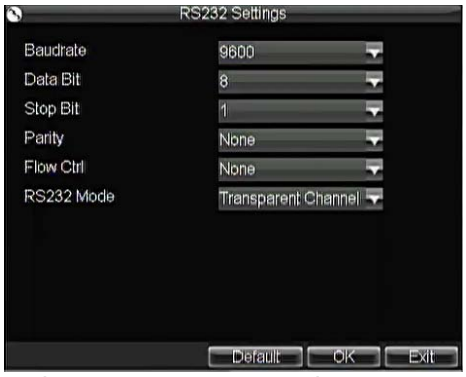



Figure 12-3 RS-232 Settings Menu

**2.** Configure RS-232 Settings.

**3.** The RS-232 port can be used in two ways:
- **Console:** Connect a PC to the TVR-LT using the PC serial port. Device parameters can then be set using software such as HyperTerminal. The serial port parameters must be the same as the TVR's when connecting via the PC serial port.
- **Transparent Channel:** Connect a serial device directly to the TVR-LT. The serial device will be controlled remotely by the PC through the network and the protocol of the serial device.

**Note**

Changing the RS232 Mode requires a system reboot.
Please note that the remote control features through the RS-232 port are limited.

## 12.2 Managing User Accounts

By default, your TVR-LT comes with one user account, the Administrator account. The Administrator user name is admin and the password is 12345. The default password for Administrator should be changed immediately for security reasons. The Administrator has the authority to add, delete or configure parameters for many of the system functions.

### 12.2.1 Adding a New User

You may add up to 31 new users to your TVR-LT.

**To add new users:**

1. Enter the User Settings menu, shown in Figure 12-4 by clicking Menu > Settings > User

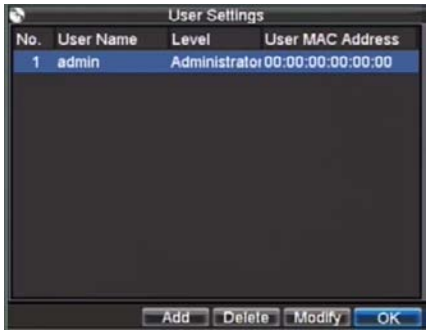



Figure 12-4 User Settings Menu

2. Click Add to enter the Add User menu, shown in Figure 12-5.

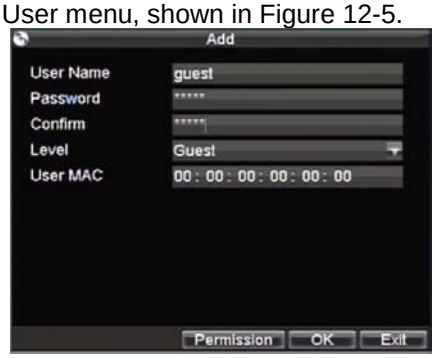



Figure 12-5 Add User Menu

3. Enter the **User Name**, **Password** and **Level** for the new user. The **User MAC** is optional.
4. The **Level** is the user level and is separated into two tiers.
   • **Operator:** The Operator user level has the authority to configure two-way audio in network settings and all parameters in channel settings.
   • **Guest:** The Guest user cannot configure network settings, but can configure local playback as well as remote playing in channel settings.
5. If **User MAC** is configured and enabled, the user may only access the TVR-LT from that particular MAC address.
6. Select the Permission button to enter the Privilege Settings menu, shown in Figure 12-6.

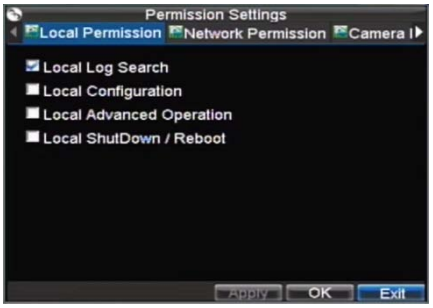



Figure 12-6 Privilege Settings Menu

**7.** Configure privileges for local settings under the **Local Permission** tab. The local settings are:
- **Local Log Search:** Search and view the log files of the TVR-LT.
- **Local Configuration:** Configure and restore parameters to factory defaults. Import settings or export settings from the TVR-LT.
- **Local Advanced Operation:** HDD management (including initialization and changing the properties of a disk). Ability to update system firmware as well as to stop output.
- **Local Shutdown/Reboot:** Shutdown or reboot the TVR-LT.

**8.** Click on the **Network Permission** tab to configure network privileges, as shown in Figure 12-7.

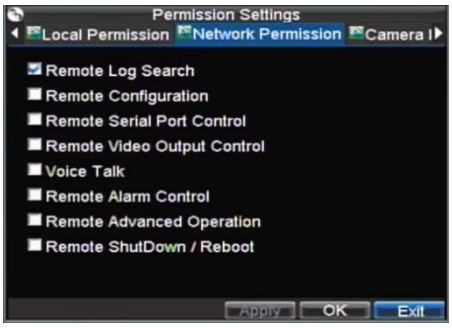



Figure 12-7 Network Privileges Menu

The network settings available are:
- **Remote Log Search:** Remotely view logs that are saved on the TVR-LT.
- **Remote Configuration:** Remotely configure parameters, restore parameters to factory defaults and import settings to as well as export settings from TVR-LT.
- **Remote Serial Port Control:** Configure settings for RS232 and RS485 ports.
- **Remote Video Output Control:** Configure settings for video output.
- **Two-Way Audio:** Ability to use two-way audio between the remote client and the TVR-LT.
- **Remote Alarm Control:** Remote alert or control the relay output of the TVR-LT. Alarm and exception settings must be configured properly to upload to host.
- **Remote Advanced Operation:** Remotely manage hard disk drives (initializing and setting properties for HDDs). Update system firmware remotely and stop output.
- **Remote Shutdown/Reboot:** Remotely shutdown or reboot the TVR-LT.

**9.** Click on the **Camera Permission** tab to configure camera privileges, as shown in Figure 12-8.

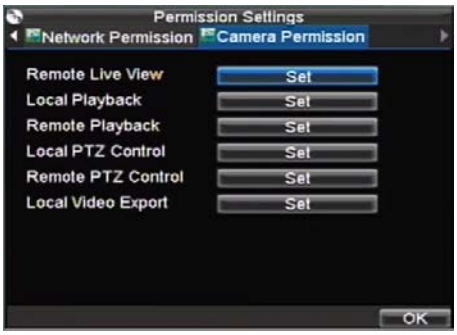


Figure 12-8 Camera Permission Menu

The channel settings include:

- **Remote Live View:** Select and view live video over the network.
- **Local Playback:** Locally play recorded files that are on the TVR-LT.
- **Remote Playback:** Remotely play and download recorded files that are on the TVR-LT.
- **Local PTZ Control:** Locally control PTZ cameras.
- **Remote PTZ Control:** Remotely control PTZ cameras.
- **Local Video Export:** Locally backup recorded files from any of the channels.

**10.** Click OK to save and exit the menu.

**Note**

If you forget the password to your TVR, contact your supplier with the serial number of your TVR-LT to obtain a secure code to reset your TVR-LT.

## 12.2.2 Deleting a User

**To delete a user from the TVR:**

1. Enter the User Settings menu by clicking Menu > Settings > User.
2. Select the user to delete.
3. Click Delete to delete the user.
4. Click OK to exit the menu.

## 12.2.3 Modifying a User

**To modify a user:**

1. Enter the User Settings menu by clicking Menu > Settings > User.
2. Select the user to modify.
3. Click Modify to enter the Modify menu, shown in Figure 12-9.

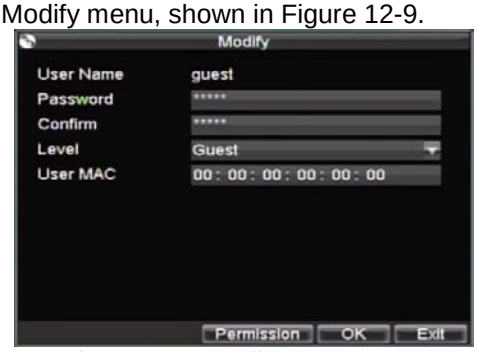


Figure 12-9 Modify User Menu

4. Edit user information.
5. To modify user permissions, click Privileges. Permissions settings are defined in the section above, **Adding a New User**.
6. Click OK to exit menu.

## 12.3 Managing the System

Configuration information from your TVR-LT can be exported to a USB device and imported into another TVR-LT. This will allow you to efficiently set up the same configuration on numerous TVRs.

**To import or export TVR-LT configuration:**

1. Enter the Import/Export Configuration menu, shown in Figure 12-10 by clicking Menu > Maintenance > Configuration.

Figure 12-10 Import/Export Configuration Menu

2. Click Export to export a configuration file to a USB or CD/DVD device, (which must be connected at this point to the TVR-LT.)
3. To import a configuration file, select the file from the USB or CD/DVD device and click Import.
4. Click Cancel to exit out of the menu.

**Note**
A system reboot is required to make the imported configuration file effective.

## 12.4 Upgrading System Firmware

The firmware on your TVRVS2 can be upgraded using via a USB device or over the network via an FTP server.

**Note**
Both of these methods require system reboot after a successful upgrade.

**To upgrade via a USB device:**

1. Connect the USB device to TVR-LT. The firmware file must be located in the root directory of the USB device.
2. Enter the Firmware Upgrade menu, shown in Figure 12-11 by clicking Menu > Maintenance > Upgrade.

Figure 12-11 Firmware Upgrade Menu

3. Select the **Local Upgrade** tab.
4. Select the firmware on the USB device.
5. Click Upgrade to begin the update process.
6. After the system firmware has been upgraded, reboot the TVR-LT.

**To upgrade via an FTP server:**

1. Configure the PC (running FTP server) and the TVR-LT to be in the same Local Area Network. Run the 3rd-party TFTP software on the PC and copy the firmware into the root directory of TFTP.
2. Enter the Firmware Upgrade menu by clicking Menu > Maintenance > Upgrade.
3. Select the **FTP** tab, shown in Figure 12-12.

Figure 12-12 FTP Firmware Upgrade

4. Input the FTP server address.
5. Click Upgrade to begin the update process.
6. After the system firmware has been upgraded, reboot the TVR-LT.

**Note**

FTP server must be configured using account “target” and password “target” before upgrade.
If the TVRVS2 was upgraded correctly, you must reboot it to take effect.
If the TVR-LT fails to upgrade, please contact your system supplier for further assistance.

## 12.5 Restoring Default Settings

**To restore default factory settings to your TVR:**

1. Enter the Default Settings menu, shown in Figure 12-13 by clicking Menu > Maintenance > Default.

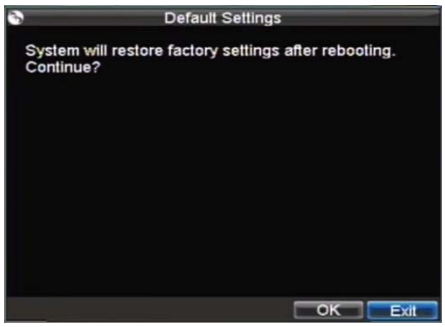


Figure 12-13 Default Settings Menu

**2.** Click OK to restore factory defaults.

**Note**
A system reboot is required to make the factory settings effective.
Network information such as IP address, subnet mask and gateway will not be restored.

## 12.6 Viewing System Information

**To view system information:**
**1.** Enter the Information menu, shown in Figure 12-14 by clicking Menu > Maintenance > Information.

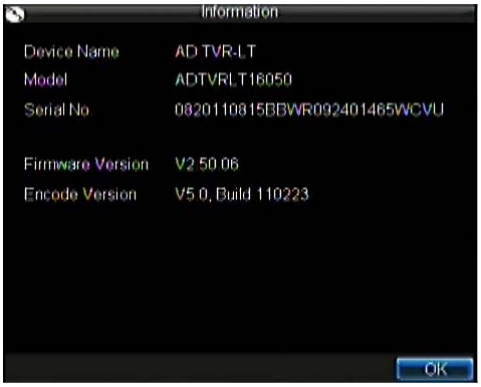


Figure 12-14 System Information

**2.** Click OK to exit to the previous screen.

## 12.7 Viewing System Logs

Many events of your TVR-LT are logged into the system logs.

**To access the system logs and search for these events:**
**1.** Enter the Log Search menu, shown in Figure 12-15 by clicking Menu > Maintenance > Log Search.

Figure 12-15 Log Search Menu

2. Set search parameters.
3. Click Search to begin the search. If logs matching the search criteria are found, the results will be displayed in a list similar to that of Figure 12-16.

Log Search
Main Type Start Time Minor Type Parameter
Inform 12-09-2010 00:00: Stop Recording N/A
Inform 12-09-2010 00:00: Start Recording N/A
Inform 12-09-2010 00:00: Stop Recording N/A
Inform 12-09-2010 00:00: Start Recording N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Excep 12-09-2010 00:00: Video Signal Lo N/A
Details
Play
Export
Exit

Figure 12-16 Log Search Results

4. To view more detailed information about a particular log entry, select the entry and click Details.
5. If applicable, you may also view the video associated with the selected log entry by clicking Play.
6. Log files can also be exported to a USB device. To export a log file, connect a USB device to the TVR, select the log file to export and click Export. This will take you to the Log Search Export menu, shown below in Figure 12-17. Click Export to export log onto USB device. The exported file will be named according to the time it was exported (i.e. 2000062991627.txt).

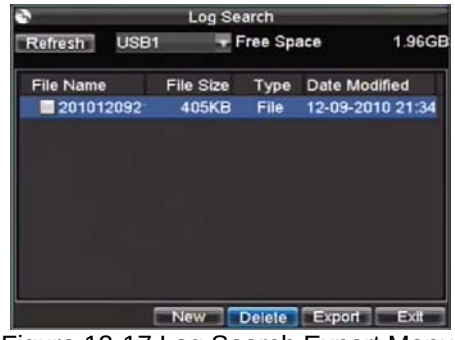



Figure 12-17 Log Search Export Menu

7. Click Cancel to exit out of menu.

# Part II Web Client Operation

# Chapter 1 Web Client Introduction

The Web Client is embedded in the TVR-LT. When you use the web browser to access the TVR-LT, it will be downloaded automatically.

**Note**

You must run the web browser as an administrator in order to download the Active X control.

Operation System: Microsoft Windows XP with SP2 and SP3,
Windows Vista 32 bit Home/Premium/Ultimate with SP2 and
Windows 7
Web browser: IE 6, IE 7, IE 8 or IE 9.
Minimum PC requirements:
CPU: Intel Pentium IV 2.4 GHz
RAM: 1G
Display: Integrated graphics card or Standalone graphics card (1024×768 resolution)

Recommended PC requirements:
CPU: Intel Core i5 750 or AMD Phenom II X4 955
RAM: 4GB
Display: Standalone graphics card (1024×768 resolution or above)

## 1.1 Install Web Client

Change the internet security level to ensure that the ActiveX control can be downloaded. Open the IE browser and navigate to: Tools → Internet Options → Security → Internet → Custom Level (As shown in Figure 1-1). In the Settings list, enable all options related to ActiveX controls.

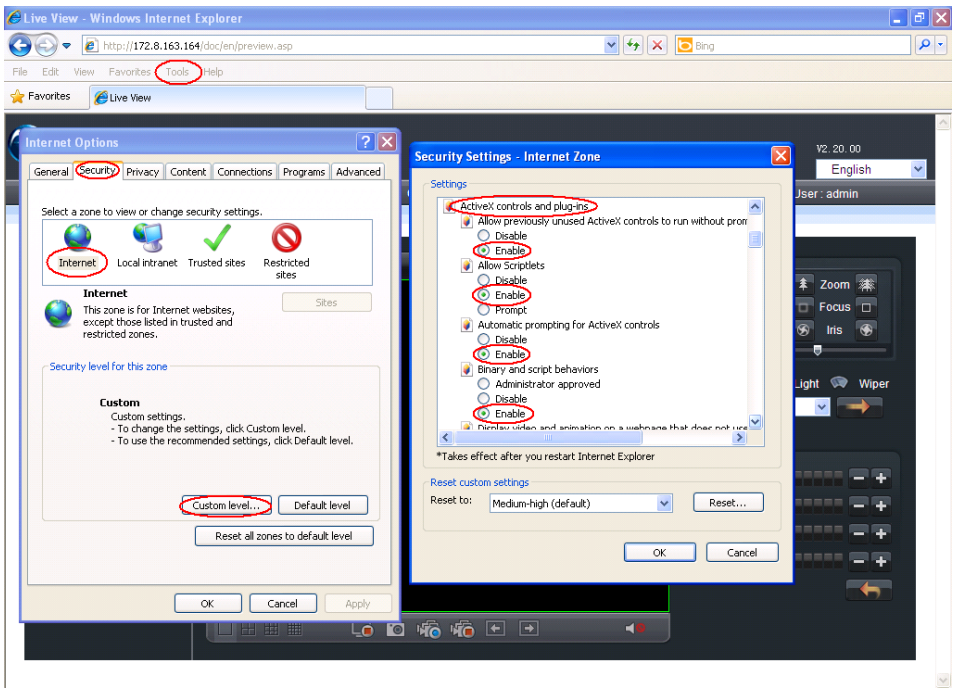



Figure 1-1

Enter the IP address or domain name of the TVR-LT in the browser address field and press return, then confirm the installation of web client for first use. Available languages are: English, French, Simplified Chinese, German, Spanish, Italian, Portuguese (Brazilian) and Dutch. After installation, an interface appears (as shown in Figure 1-2), which confirms that the web client has been downloaded successfully.

Figure 1-2

## 1.2 Notes for IE 7&8 on Windows Vista and Windows 7

The Web Client requires write permission if users want to save screen shots, video clips or TVR-LT configuration files. For IE 7&8 on **Windows Vista** and **Windows 7**, please make sure you have full

administrator privileges before using the Web Client, or disable the ‘Protected Mode’ of IE 7 and IE 8. Otherwise the Windows UAC (User Account Control) will restrict the respective operation and cause it to fail. Cs in the example preview snapshot, preview record and export configuration file, shown in figures 1-3, 1-4 and 1-5 below.

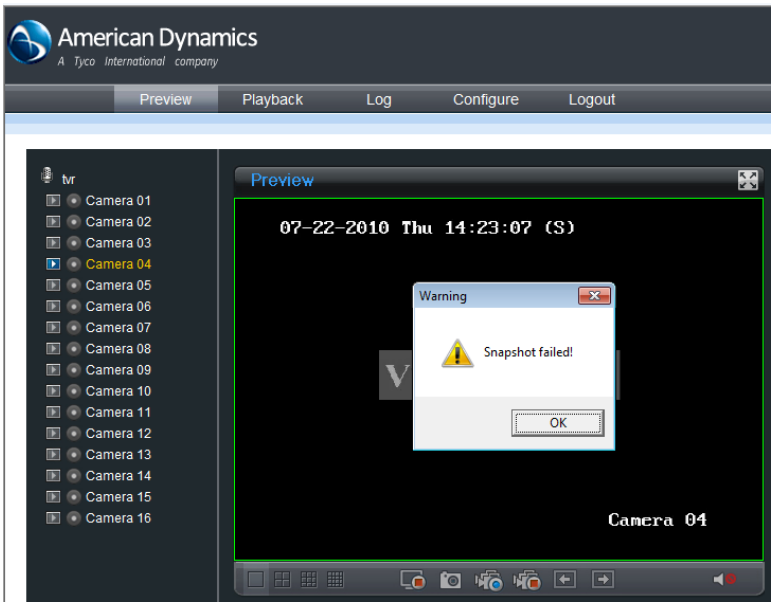



Figure 1-3

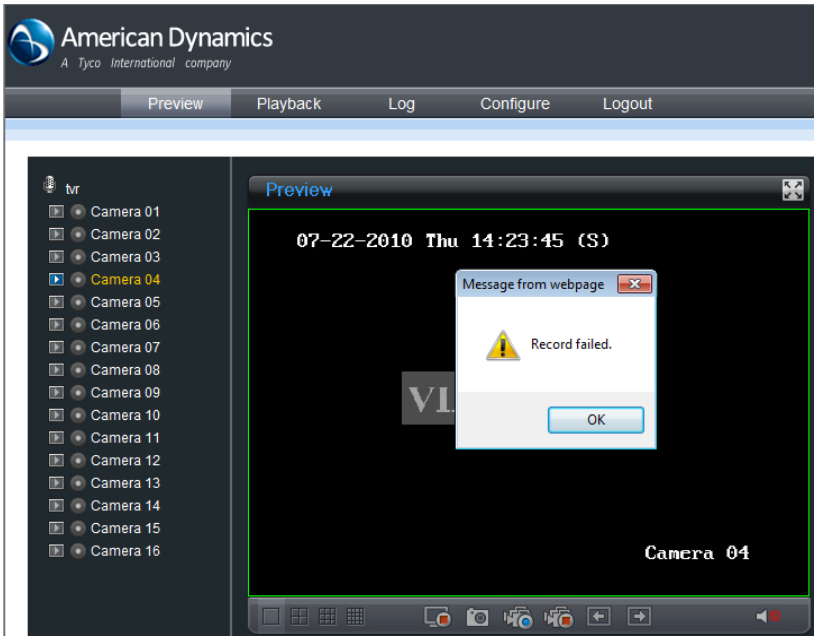



Figure 1-4

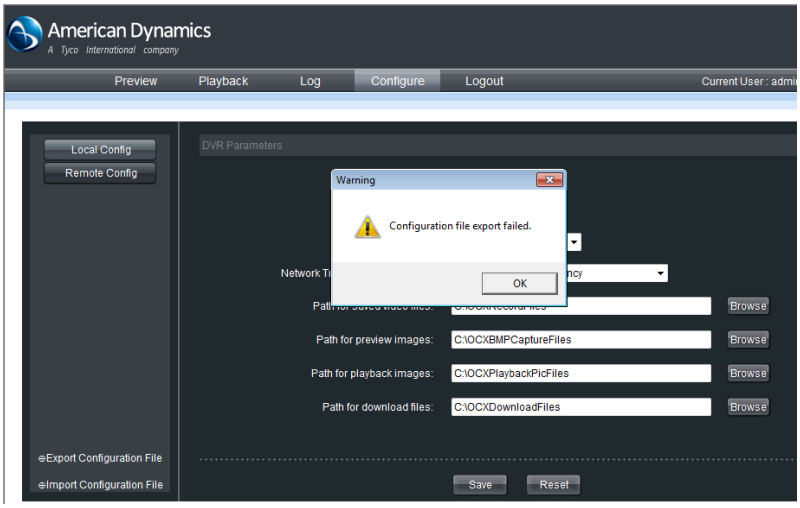



Figure 1-5

## 1.2.1 Run web browser as administrator

The user must operate the web browser using the ‘Run as administrator’ method if taking a snapshot, recording video or exporting a configuration file. This will allow the Web Client to write files correctly. Right-click on the browser icon and choose ‘Run as administrator’ option, as shown in figure 1-6 below.

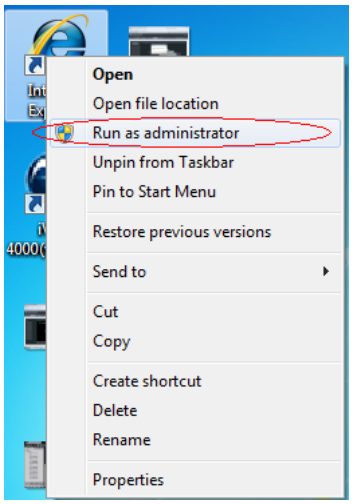



Figure 1-6

A User Account Control message will open, click ‘Yes’, as shown in figure 1-7 below.

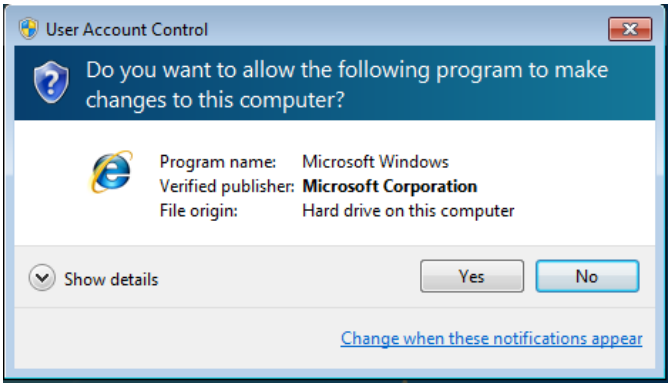

User Account Control
Do you want to allow the following program to make changes to this computer?
Program name: Microsoft Windows
Verified publisher: Microsoft Corporation
File origin: Hard drive on this computer
Show details
Yes
No
Change when these notifications appear

Figure 1-7

## 1.2.2 Always run web browser with administrator privileges

In order to operate the web browser with default administrator privileges permanently, the properties of the web browser shortcut should be changed.

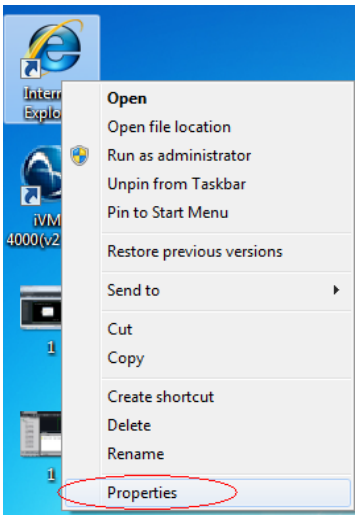



Figure 1-8

Right-click on the browser icon and choose ‘Properties’, as shown in figure 1-8 above.

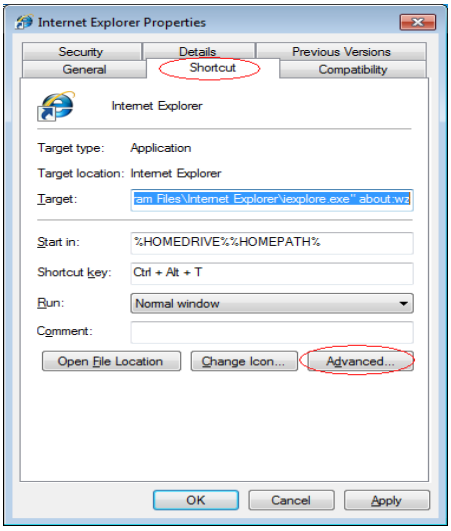



Figure 1-9

Select the Shortcut tab, then click ‘Advanced’, as shown in figure 1-9 above.

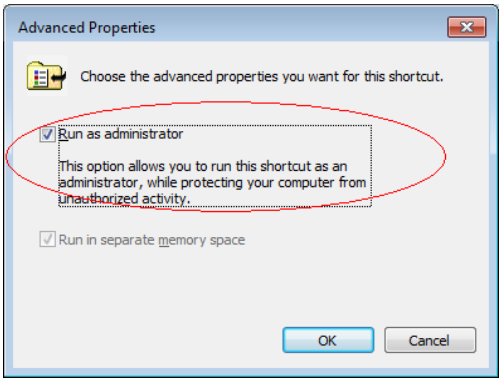

Advanced Properties
Choose the advanced properties you want for this shortcut.
Run as administrator
This option allows you to run this shortcut as an administrator, while protecting your computer from unauthorized activity.
Run in separate memory space
OK
Cancel

Figure 1-10

Select the ‘Run as Administrator’ checkbox, then click OK, as shown in figure 1-10 above.

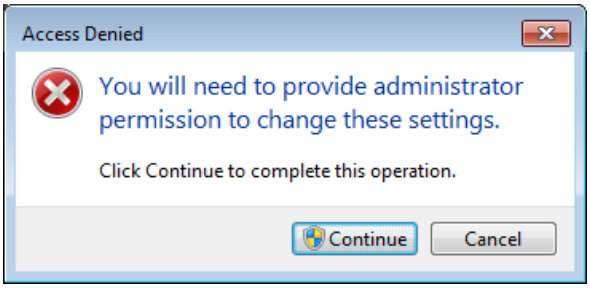

Access Denied
You will need to provide administrator permission to change these settings.
Click Continue to complete this operation.
Continue
Cancel

Figure 1-11

Click OK and a message box will open. Click ‘Continue’ to accept the change, as shown in figure 1-11 above.

**Note**

If you do not understand the Windows Vista/7 UAC or are unsure about your privileges, please contact your IT support organization for help.

## 1.2.3 Disable the ‘Protected Mode’ for IE 7&8

In IE ‘Advanced Properties’, click to disable the ‘Protected Mode’ option, then click ‘OK’ to proceed, as shown in figure 1-12 below.

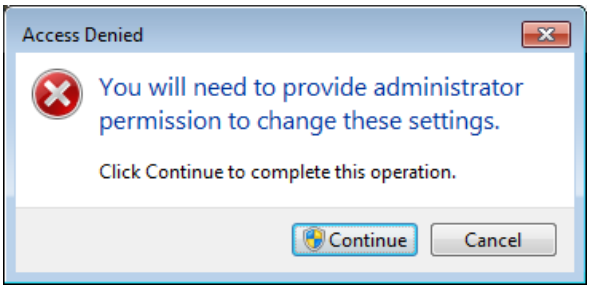

Access Denied
You will need to provide administrator permission to change these settings.
Click Continue to complete this operation.
Continue
Cancel

Figure 1-12

# Chapter 2 Login and Logout

Enter the IP address or domain name of the TVR-LT in the browser address field and press Return. The Web Client interface will appear in English, and maximize to full screen. It will adapt to the OS language automatically. This can be changed in the drop down list at the top right-hand corner.

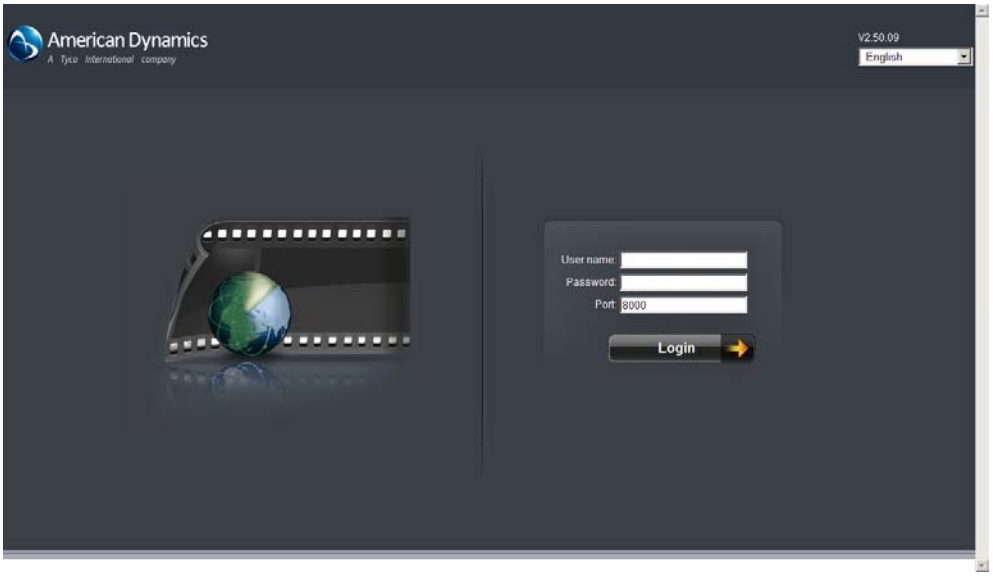



Figure 2-1

Enter the Username, Password and Port to access the Web Client. The default Username is ‘admin’, the default Password is ‘12345’, and the default Port is ‘8000’.

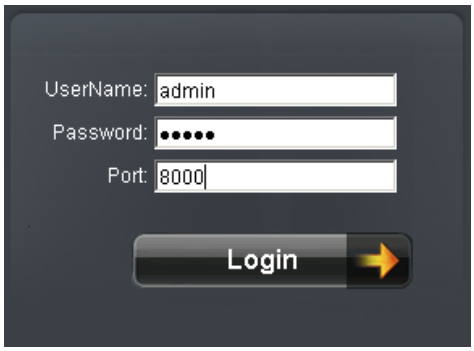



Figure 2-2

When you want to exit the Web Client, click Logout → OK to exit.

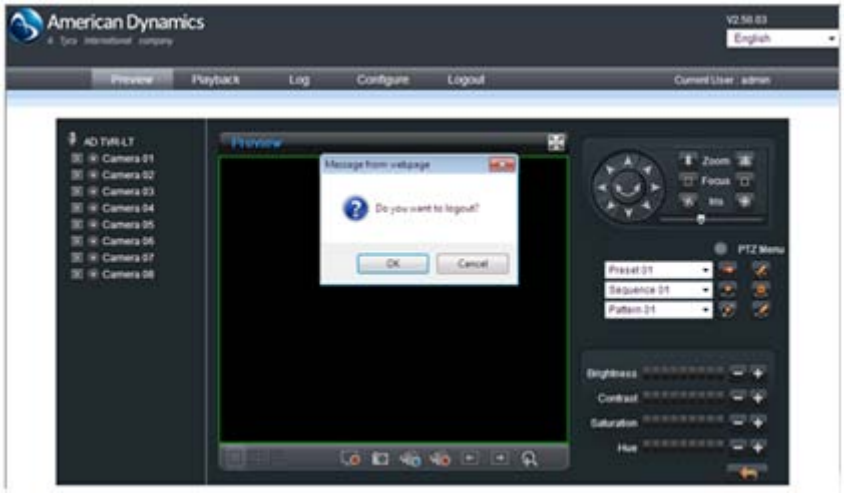

American Dynamics
Preview
Playback
Log
Configure
Logout
Message from webpage
Do you want to logout?
OK
Cancel
Zoom
Focus
Iris
PTZ Menu
Brightness
Contrast
Saturation
Hue

Figure 2-3

# Chapter 3 Preview

The Web Client will enter the preview interface by default following a successful login:

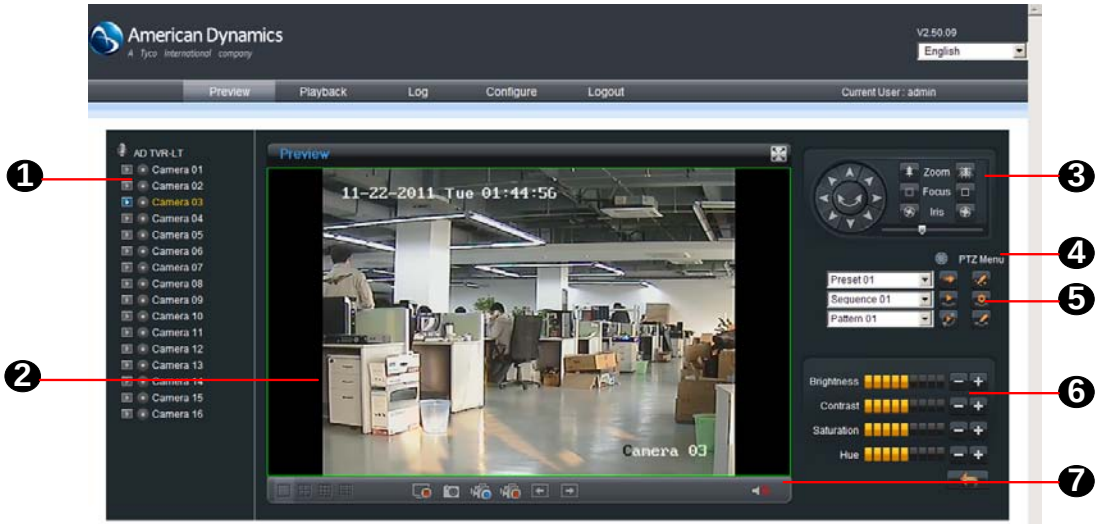



Figure 3-1

Interface description: Table 3-1

| Zone number | Description | Zone number | Description |
|---|---|---|---|
| ❶ | Device and channel | ❷ | Video panes |
| ❸ | PTZ | ❹ | PTZ Menu |
| ❺ | Preset, Sequence and Pattern. | ❻ | Image Parameters |
| ❼ | Playback control | | |

Live view control buttons: Table 3-2

| Buttons | Description | Buttons | Description |
|---|---|---|---|
| | Single pane | | 4 panes |
| | 9 panes | | 16 panes |
| | Snap shot | | All channels stop preview |
| | All channels stop record | | All channels start record |
| | Next page (starting from the first channel or first set of channels) | | Last page (starting from the last channel or last set of channels) |
| | Audio On/Off | | |

# 3.1 Preview

## 3.1.1 Panes

The users may select different modes for preview; the following are supported: 1X1, 2X2, 3X3 and 4X4.

## 3.1.2 Live view

**By channels:**

Select one pane. Click on the icon in front of the channel name to start previewing, the icon will turn to if the channel preview is successful as shown in Figure 3-2.

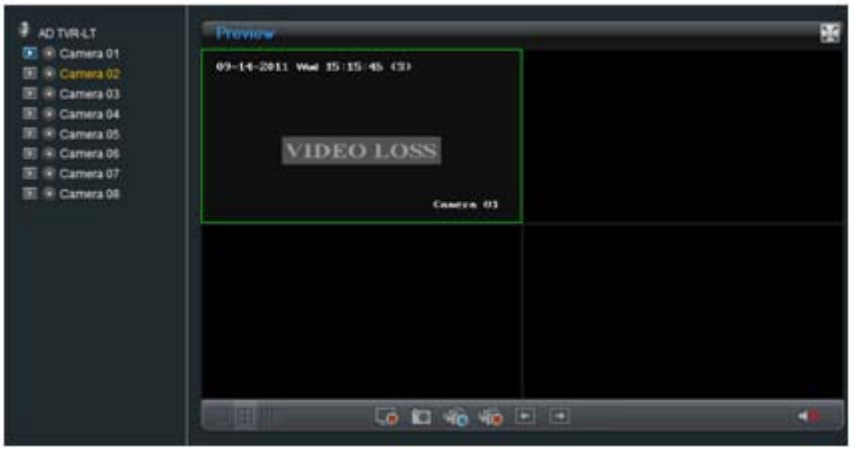



Figure 3-2

**By device:**

Select one pane. Double click on the name of the device to start previewing according to the number of windows selected. It is unnecessary to drag channels individually to the viewing panes. Click on to select the next set of channels for preview, and click on to select the previous set of channels for preview. The behavior is dependent on how many channels the TVR-LT has and how many windows have been selected for previewing. For example if a 2X2 view is selected and the TVR-LT has a total of 8 channels then each time is clicked the next 4 channels will be displayed.

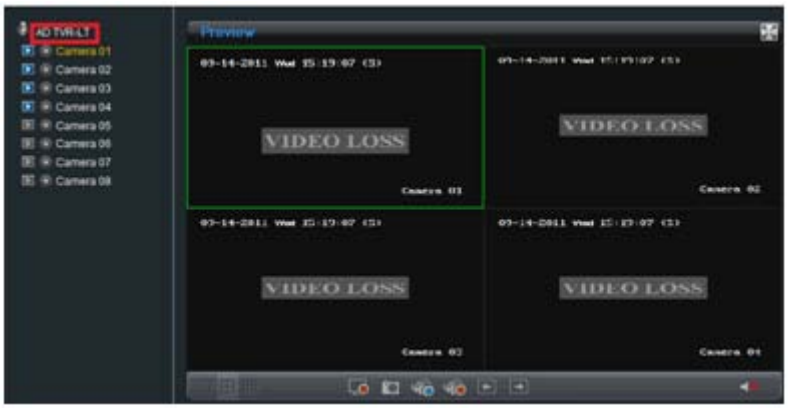



Figure 3-3

## 3.1.3 Live view control

**Zoom:** Double click on one channel in live view mode to view it in full screen. Double click again to restore it to the normal view.

Figure 3-4

**Full screen display:** click on the icon for full screen display, click on the icon to restore.

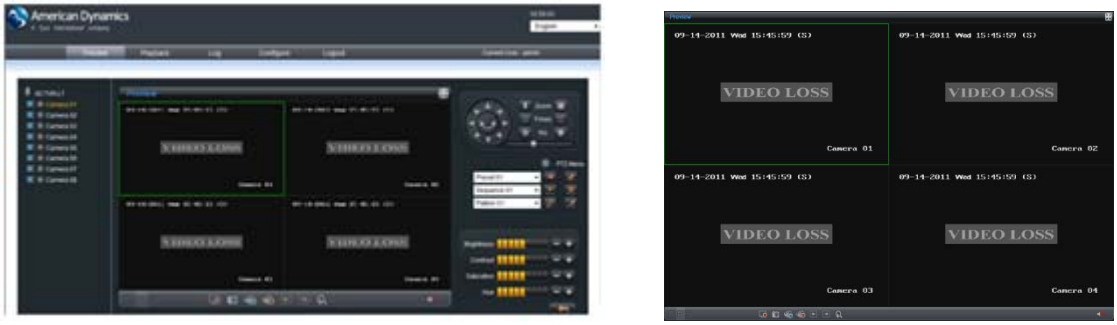



Figure 3-5

Select a live view channel and click on the icon to enable audio, the audio status will turn to .

Then click on the icon to adjust volume.

Click on the icon to disable audio, the status will turn to .

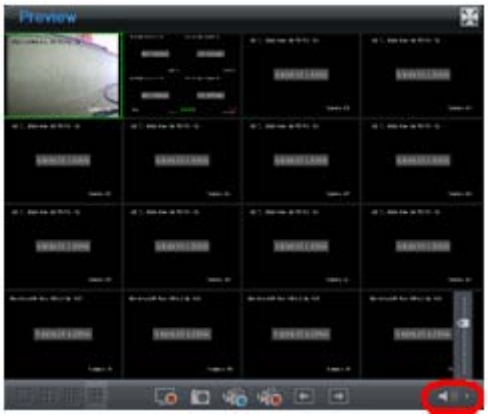



Figure 3-6

**Note**

Only one audio channel can be enabled, so it will automatically disable any previous channel's audio if you turn on the next channel's audio.

### 3.1.4 Stop preview

Click on the icon in front of camera number, the status will turn to and stop live view.
Click on the icon to stop live view of all channels.

**Note**

1. Any single channel can support up to 6 simultaneous streaming connections.
2. TVR-LT supports up to 48 video stream connections as a combination of Main and Sub Stream.

## 3.2 Start recording and take a snap shot

The user can record video on to the local HDD or take snap shots when previewing.

### 3.2.1 Instant Recording

Enter Configure > Local Config, to set the path for saved video files and select the size of video file as shown in Figure 15-7.

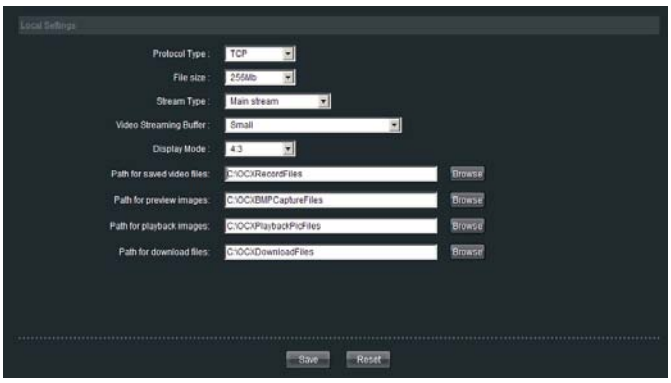



Figure 3-7

In preview mode, click on the icon in front of the camera name to start recording, the icon will turn to if successful, otherwise a message will notify the failure.
Click on the icon to stop recording. A pop-up will briefly display the path to the folder of saved video files.
Click on icon to start recording for all channels in preview mode, and click on icon to stop recording accordingly.

Figure 3-8

**Note**

Recording will stop automatically when the disk partition has less than 500Mb free space or will quit live view.

## 3.2.2 Snap shot

Enter Configure > Local Config to set the save path for preview image files, as shown in Figure 3-9.

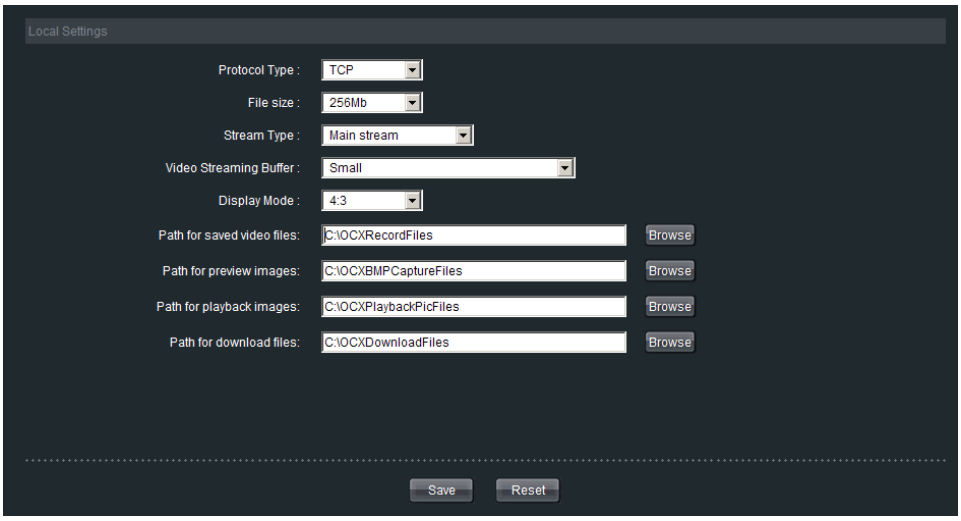



Figure 3-9

In preview mode, click on icon to take a snap shot, and then the folder of saved image files will pop up.

**Note**

Snap shot will fail when the partition has less than 500Mb free space.

# 3.3 Voice talk

In preview mode, click on the icon to start voice talk with the TVR, click icon to stop voice talk, as shown in Figure 3-10.

Figure 3-10

## 3.4 Image parameters

Select a camera in preview mode, then Brightness, Contrast, Saturation and Hue can be adjusted as shown in Figure 3-11.

Click on to increase level, click on to decrease level, or click on or to set appropriate level.

Click on to restore default settings.

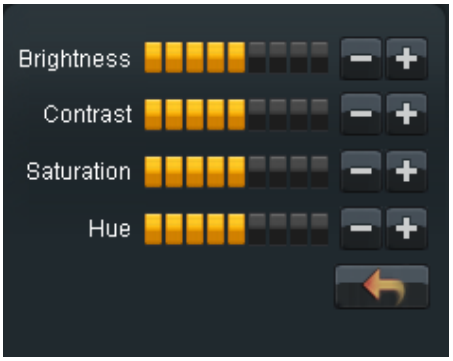



Figure 3-11

# Chapter 4 PTZ

In the preview interface, the user can operate PTZ control.

Before performing PTZ operations, please ensure that RS-485 parameters have been correctly configured and that the PTZ camera or Speed Dome has been connected. Please refer to chapter 7.3.4 Serial Parameters for PTZ RS485 configuration.

(Please note that when using a PTZ dome such as the AD Ultra 8 for example, which uses the AD422 PTZ protocol 4800 baud, it is necessary to reboot or power up the camera after the PTZ settings have been entered in the TVRV-LT PTZ menu. During the power up operation the camera will detect the type of PTZ network it is connected to. An on-screen message over the camera's video will display "detecting network". During this time the user should click on one of the direction arrows shown in Figure 4-1 below. After about 30 seconds the network will be detected and display "EIA422". Continue to click on one of the direction arrows for a further 15 seconds and the camera should respond to the PTZ commands being sent.)

There are 8 keys to control PTZ directions, click the icon to start and stop auto scan. The function of this button when used with an AD Ultra 8 camera or Optima LT camera is to initiate the "apple peel" pattern. Clicking the icon again stops the "apple peel" pattern.
Click the function keys on the right to adjust focus, iris and zoom.

Click the icon to access to PTZ menu. Click buttons to move upwards and downwards in the dome camera's menu. The focus out button acts as the Enter button in the camera's dome menu.
If a preset has been configured correctly, the user can select the preset from the dropdown list and click to call it.

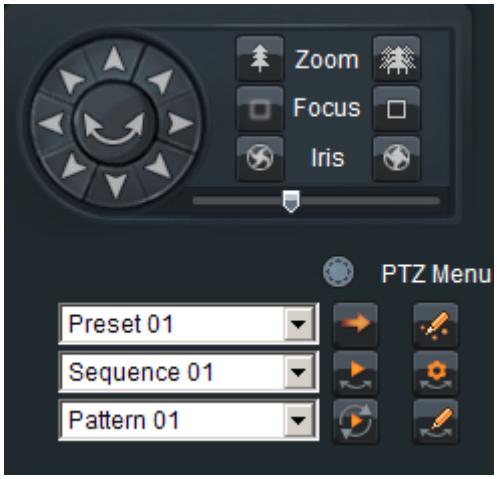



Figure 4-1

As shown in Figure 4-1, the Web Client also allows users to set and call presets, sequences and patterns.

## 4.1 Customizing Presets

Presets can be set to move your PTZ camera to a desired preset location at the click of a button.

**Configure Preset:** Use the PTZ control panel to adjust the position of the preset. Select a Preset number and click the button to save preset location.

**Call Preset:** Select a Preset and click button.

**Note**

Only valid presets can be called.

## 4.2 Customizing Sequences

Sequences can be setup to move the PTZ to different key points and have it stay there for a set duration before moving on to the next point. The key points are defined by presets which can be set by following the steps above in **Customizing Presets**.

**Configure a Sequence:**

1. Select a **Sequence No.** to set.
2. Click Set to enter the Sequence Settings menu (Figure 4-2). A sequence must have at least 2 valid presets.

Figure 4-2

3. Select a Sequence No. in the dropdown list and click Add to add presets for this sequence in turn. Each preset can be set with a Dwell Time and Dwell Speed. The Dwell Time refers to the time span to stay at the corresponding key point. Dwell Speed defines the rate at which the PTZ will move from one key point to the next.
4. Click Save to return Preview interface.

**Call or Stop Sequence:**

1. Select a valid **Sequence Number**.

2. Click button to call the sequence or click button to stop the sequence.

## 4.3 Customizing Patterns

Patterns can be set up by recording the movement of the PTZ.

**Record a Pattern:**

1. Select a **Pattern Number**.

2. To record a pattern, click button to start recording the movements of the PTZ. Use the PTZ control panel to move the PTZ. The PTZ movements will be recorded until the button is clicked again to stop recording.

**Run Pattern:**

Click the button to run a valid pattern. The PTZ will move according to the path that was defined until the button is clicked again.

**Note**

The user can control PTZ in preview mode only.

The PTZ Menu function is only available for cameras that contain an onboard PTZ dome menu. If a dome has no PTZ menu, there will be no response when clicking this button.

# Chapter 5 Playback

Click Playback to enter the playback interface.

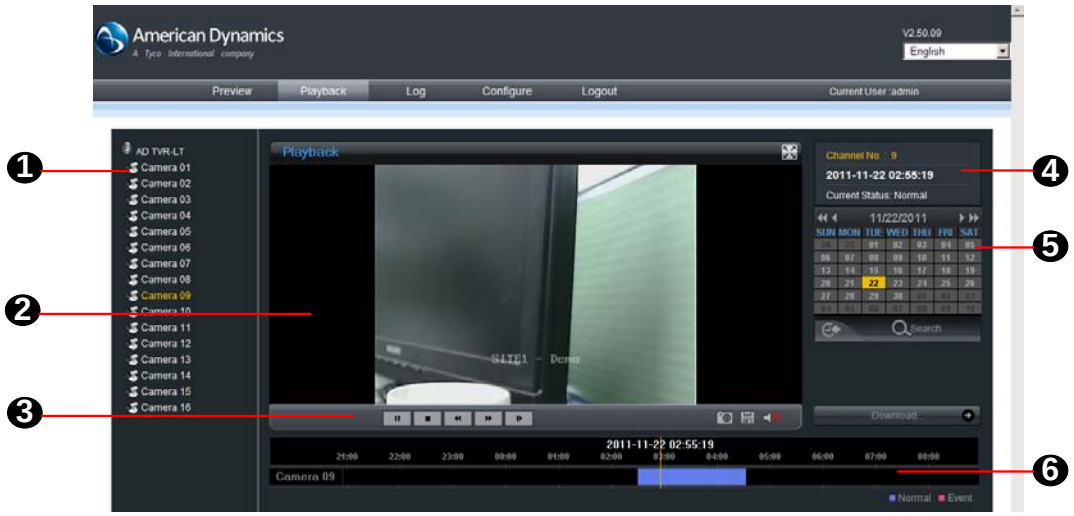



Figure 5-1

Interface description: Table 5-1

| Area | Description | | Area | Description |
|---|---|---|---|---|
| ❶ | Channel area | | ❷ | Playback window |
| ❸ | Play control buttons | | ❹ | Playback status |
| ❺ | Query area | | ❻ | Time axis area |

Play control buttons: Table 5-2

| Button | Description | | Button | Description |
|---|---|---|---|---|
| | Play | | | Stop |
| | Slow forward | | | Fast forward |
| | Single frame forward | | | Snap shot |
| | Save clip | | | Enable/Disable sound |

## 5.1 Video search

Click on the channel name and choose the camera for playback from channel area, as shown in figure 5-2.

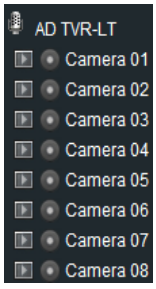



Figure 5-2

Click on the calendar to select a date for the video search, as shown in figure 5-3.

Figure 5-3

Click Search, then the Search result will appear on time bar.

Figure 5-4

Drag the camera time bar to locate the start point for playback, different colors represent different recording types, such as command recording, schedule recording and event recording.

## 5.2 Play video

After the video search, click on to begin playback. You can also double click on the recording time bar to start playback.

Figure 5-5

The playback status zone will show the playback channel number, playback speed and start time, as shown in Figure 5-6.

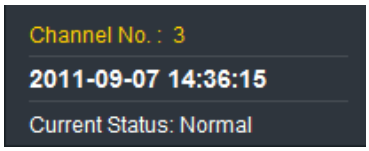



Figure 5-6

To locate the playback time, click on the icon and input the start time for playback, then click GO, it will begin playback at the specified time, as shown in Figure 5-7.

You can also drag the time bar directly with respect to the yellow marker line ‘’, then click on the Play button to start playback from the yellow marker line time.

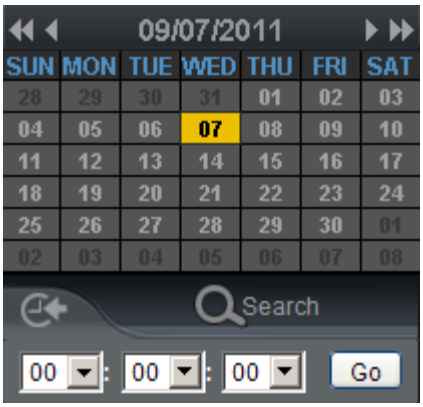



Figure 5-7

## 5.3 Screenshot and download

Enter Configure > Local Config to set the save path for playback image files and download files.

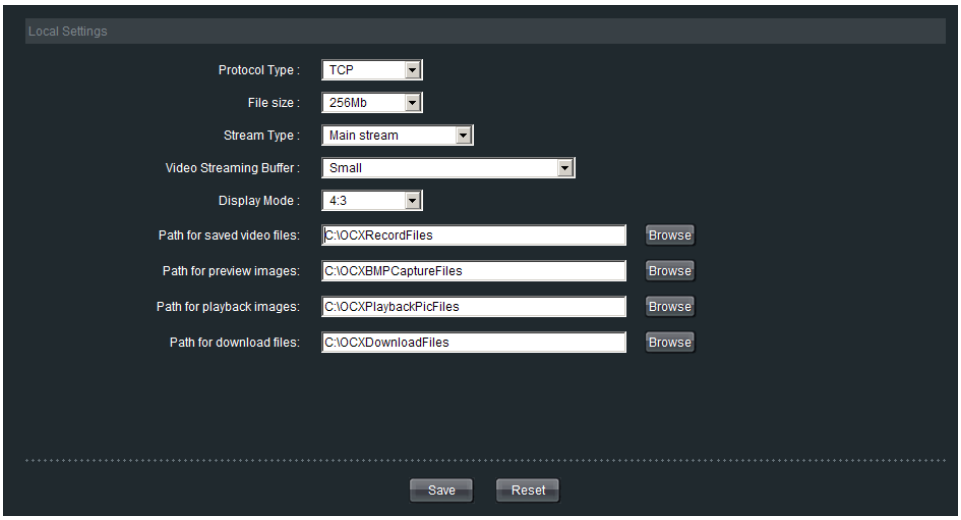

Local Settings
Protocol Type : TCP
File size : 256Mb
Stream Type : Main stream
Video Streaming Buffer : Small
Display Mode : 4:3
Path for saved video files: C:\OCXRecordFiles Browse
Path for preview images: C:\OCXBMPCaptureFiles Browse
Path for playback images: C:\OCXPlaybackPicFiles Browse
Path for download files: C:\OCXDownloadFiles Browse
Save
Reset

Figure 5-8

In playback mode, click on the icon to take a snap shot, and then the folder of saved image files will open.

In playback mode, click on the icon to save a video clip, then the “save as” dialog box will open as shown in Figure 5-9. Enter the file name and click Save to start downloading. Click on the icon to stop downloading.

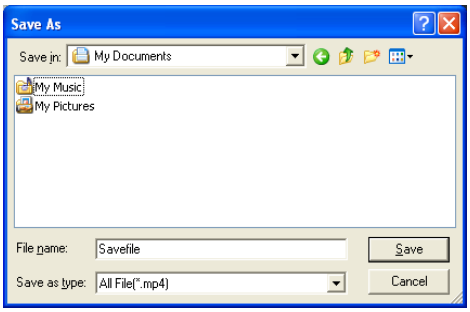



Figure 5-9

**Note**

The Snap Shot will fail when the drive has less than 500Mb free space.

After a successful video search, click on the Download... button to display a new dialog box as shown in Figure 5-10. All the video files for that day will be listed according to the Start time. Select the desired files and click on Download to start downloading. Click on Stop to stop downloading.

During the downloading process, the file index numbers and the download progress bar are displayed.

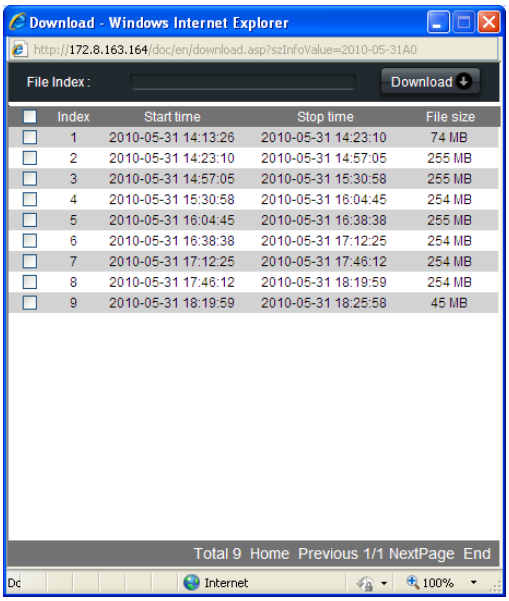



Figure 5-10

**Note**

If the default download folder is not created successfully, please check that you are operating the Internet Explorer browser as an administrator.

# Chapter 6 Log

Click **Log** to enter the log search interface, as shown in Figure 6-1.

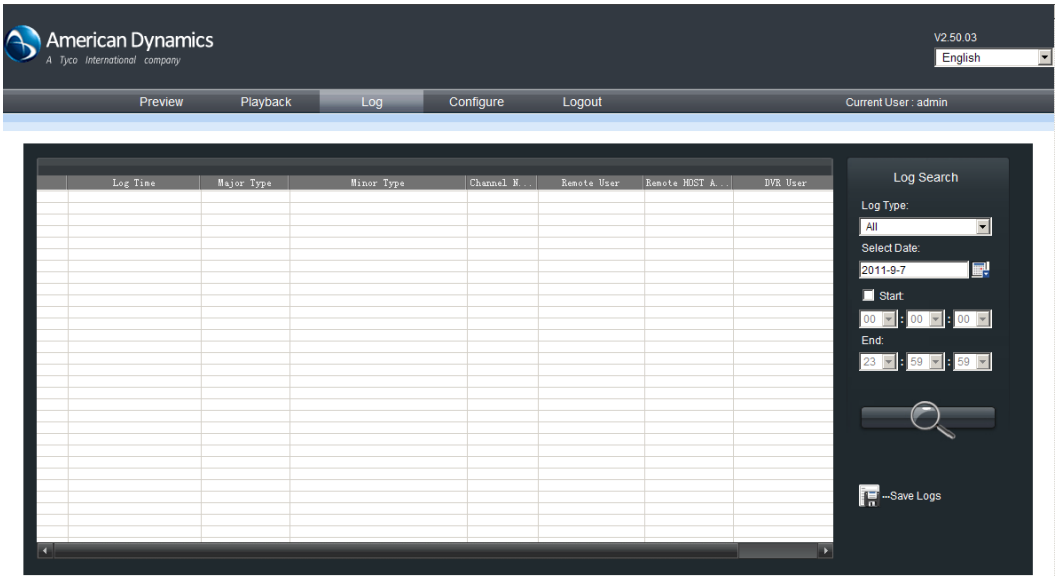



Figure 6-1

Select Log Type and Date as shown in Figure 6-2, and then click on to search for matching logs.

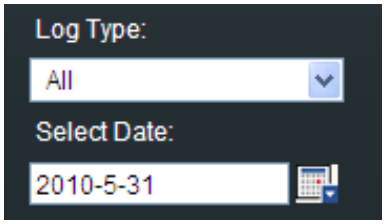



Figure 6-2

To search logs by a specified time range, you can tick as shown in Figure 6-3 and input the time range for the video search.

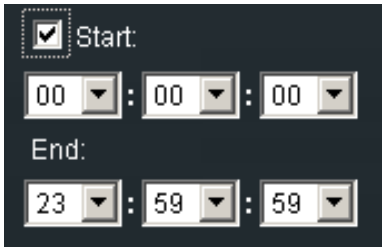



Figure 6-3

Click to export the log in either Excel or Text format.

**Note**

You can search and display up to 2000 logs, please reduce the search time range or filter the Log Type if there are more than 2000 logs.

# Chapter 7 Configuration

Click on **Configure** to enter the configuration interface, there are two options - **Local Configure** and **Remote Config**.

## 7.1 Local configuration

Click **Local Configure** to enter local parameter settings, as shown in Figure 7-1.

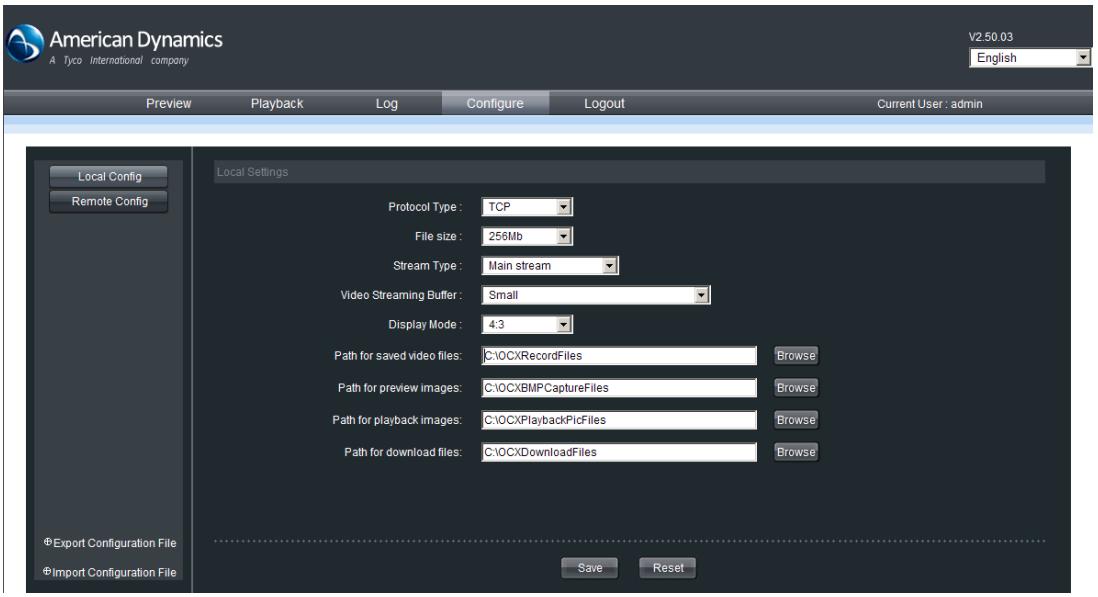



Figure 7-1

Local parameters description:

| Local Configure | Parameters | Description |
|---|---|---|
| Local parameters | Protocol type | Set network protocol, TCP and UDP are available. |
| | File size | Set the file size for recording. |
| | Stream type | Set stream type for network preview and recording, main stream and sub-stream are available. |
| | Video streaming buffer | Set video streaming buffer size for preview and playback.<br>A larger video buffer will make the preview and playback more fluent, but will take longer to buffer video. |
| | Display Mode | Display mode for video windows: 4:3, 16:9 or Full screen. |
| | Path for saved video files | Set the path for local recording. |

| | | |
|---|---|---|
| | Path for preview images | Set the path for preview snap shot. |
| | Path for playback images | Set the path for playback snap shot. |
| | Path for download files | Set the path for download recording. |

Table 7-1

## 7.2 Export and import TVR-LT configuration file

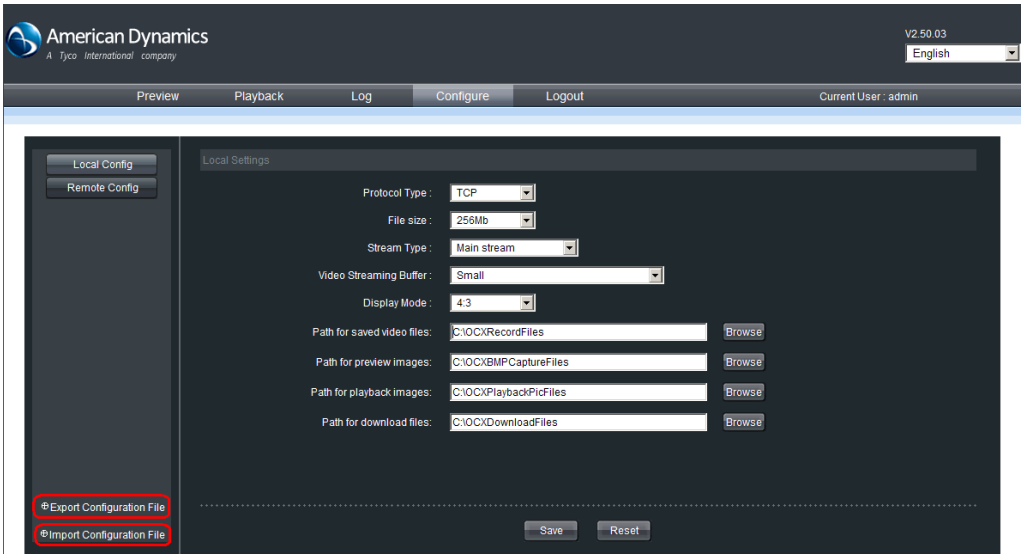



Figure 7-2

Click **Export Configuration File**, then a dialog box will open, as shown in Figure 7-3. Select the directory to save the configuration file, and then click OK.

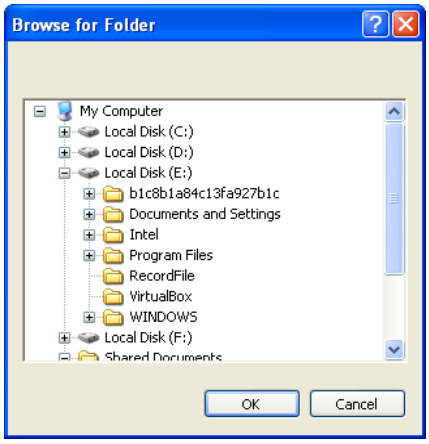



Figure 7-3

Click **Import Configuration File**, then a dialog box displays as shown in Figure 7-4. Select the configuration file and click Open.

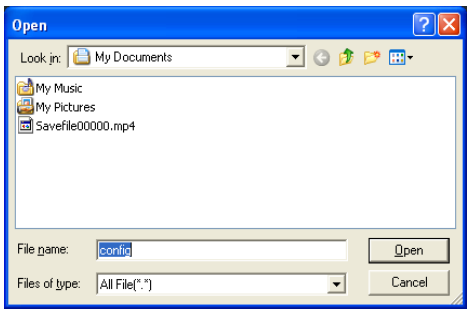



Figure 7-4

**Note**

A system reboot is required to make the imported configuration file effective.

A configuration file can only be applied to the same device model. For example, a configuration file of one ADTVRVS204XXX unit can only be applied to other ADTVRVS204XXX units.

## 7.3 Remote Configuration

You can remotely configure the parameters of the device, including channel parameters, network parameters, Serial port parameters, alarm parameters, exception parameters, user account management, hard drive settings, upgrade remotely and DST settings.

Click **Remote Configure** to enter Remote Settings, as shown in Figure 7-5.

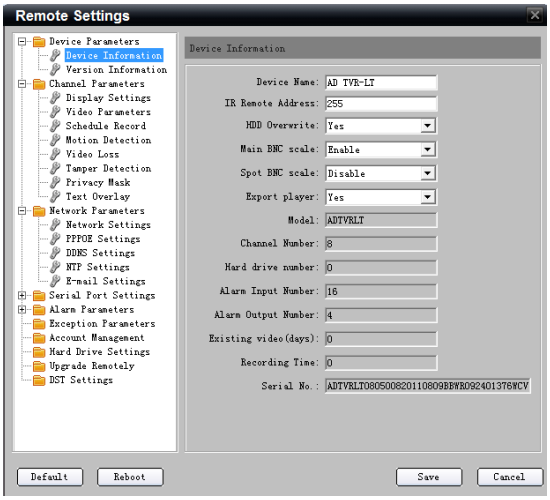



Figure 7-5

**Default:** To restore factory default settings. A system reboot is required.
**Reboot:** Restart the device remotely.

### 7.3.1 Device Parameters

In the Remote Settings menu, click Device Parameters to set the TVR-LT parameters.

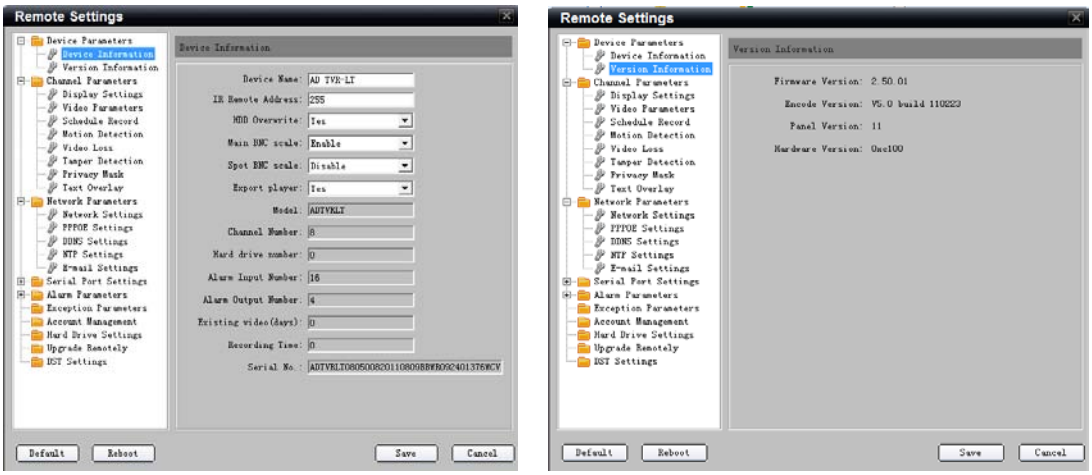



Figure 7-6

**There are two parts to the Device Parameters: Device Information and Version Information.**
**Device Information:**
**Device name:** 32 letters maximum, 16 characters maximum.
**Device ID:** The largest ID number is 255.
**Record replace:** To overwrite earlier recordings when the HDD is full, click Yes. To stop recording after the HDD is full, click No.
**Main BNC scale:** Enable/disable video output scaling for main video output.
**Spot BNC scale:** Enable/disable video output scaling for aux video output.
**Export player:** To backup video with the player, click Yes. To backup video without the player, click No.
**The Channel Number, HDD Number, Alarm Input Number, Alarm Output Number, Device Type** and **Serial Number** are not modifiable.
**Existing Video (Days):** This indicates how many days' video has been recorded on hard drive.
**Recording Time (Days):** An estimate of how many days of video can be recorded and stored on the HDD, based on dynamic changes to recording settings and historical recording behavior.
**Version Information:**
**Firmware Version, Hardware Version, Encode Version** and **Front Panel Version** are not modifiable.
Click Save and Reboot if necessary.

## 7.3.2 Channel Parameters

In the Remote Configuration menu, select the Channel configuration button to set the channel parameters.

### 7.3.2.1 Channel Display Settings

Select Channel Parameters → Display Settings

You can configure channel name, OSD and related parameters here.
Channel name: User-defined; 32 letters or 16 characters maximum.
Setup OSD properties: Select whether to Display OSD, Display Position, Display Week, OSD Properties (Non-Transparent & Flashing, Non-Transparent & Non Flashing, Transparent & Flashing, Transparent & Non Flashing) and the OSD Type (date and time display format: MM-DD-YYYY).
Set up the Channel Name properties: Select whether to display Channel Name (Display name) and the Display Position.

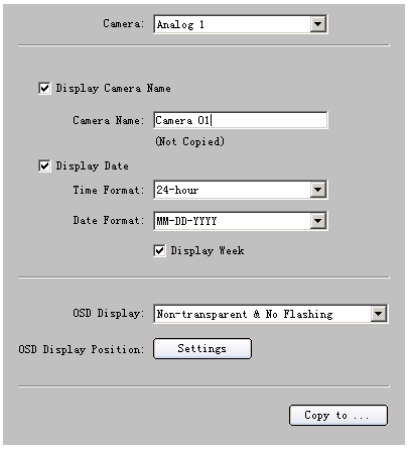



Figure 7-7

### 7.3.2.2 Encoding Parameters Configuration

Select Channel Parameters → Video Parameters to enter the encoding parameters configuration interface.

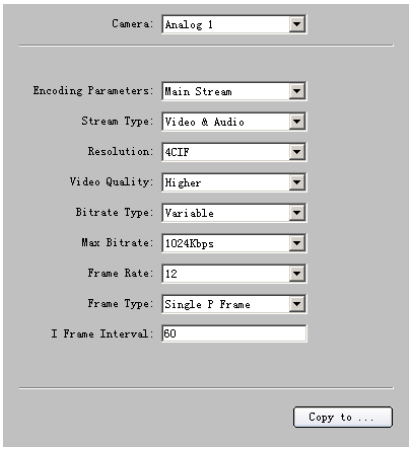



Figure 7-8

| Parameters | Description |
|---|---|
| Encoding Parameters | Main/Sub stream and Event Parameters.<br>Generally, Main stream is used for recording. Sub-stream is used for network transmission. |
| Stream Type | Video & Audio or Video stream only.<br>If [Video & Audio] is selected in the channel properties interface, then both video and audio can be recorded. Otherwise, select [Video] only. |
| Resolution | Recording Resolution.<br>Default: 2CIF. Options: QCIF, 2CIF, DCIF and 4CIF. Only QCIF and CIF can be selected when the Type is Sub-stream. |
| Video Quality | 6 options (only effective for variable bit rate type): Highest, Higher, High, Average, Low and Lowest. |
| Bit Rate Type | Variable & Constant |
| Max Bit rate | Maximum bit rate of the compressed stream<br>Valid options: 32kbps, 48kbps, 64kbps, 80kbps, 96kbps, 128kbps, 160kbps, 192kbps, 224kbps, 256kbps, 320kbps, 384kbps, 448kbps, 512kbps, 640kbps, 768kbps, 896kbps, 1Mbps and Custom (user-defined). |
| Frame Rate | Record frame rate, from 1/16 to full frame |
| Frame Type | Single P frame |
| I frame interval | The interval between two I frames, range from 1 to 100. |

Table 7-2

### 7.3.2.3 Schedule Record

1. Select Channel Parameters → Schedule Recording to enter the configuration interface. Select the 'Schedule Record' checkbox.

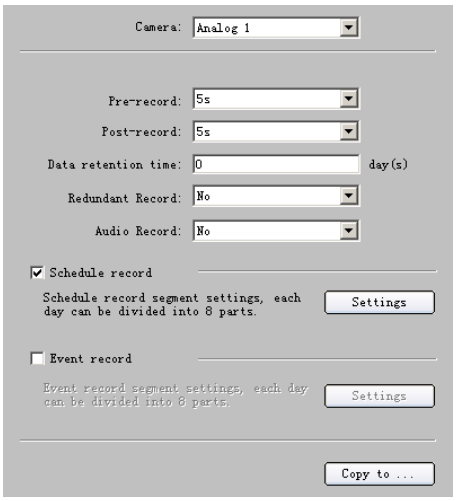



Figure 7-9

| Parameters | Description |
|---|---|
| Redundant | Redundant for this channel or not (When redundant disk is available) |
| Data retention time | Set the expiration time in days (0-31) for recorded video. Recordings after the expiration time are deleted. If set to '0,' the option is disabled. |
| Audio Record | Recorded files include audio or not |
| Pre Record | Recording time options before alarm. Options: No Pre-Record, 5s, 10s, 15s, 20s, 25s, 30s and Maximum.<br>Please note the pre-record time cannot be guaranteed. It will be affected mainly by bit rate. |
| Post Record | Recording time options after alarm stops. Options: 5s, 10s, 30s, 1min, 2min, 5min and 10min. |
| Schedule Record | Normal Record schedule segment settings. |
| Event Record | Event Record schedule segment settings. |

Table 7-3

2. Click "Settings" on "Schedule Record" to enter the Recording Schedule configuration interface. Select "Weekday" as a particular day of the week or the whole week for recording time. The "All Day Record" or 8 "Periods" can be selected as well.

**Note**

The time of each period cannot overlap.

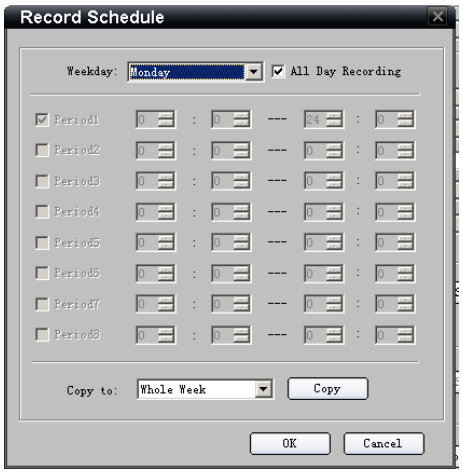



Figure 7-10

3. Click "Settings" on "Event Record" to enter event Recording Schedule configuration interface. Select "Weekday" as a particular day of the week or the whole week for recording time. The "All Day Record" or 8 "Periods" option can be selected as well.
   Click the Event Type drop down list to select the recording type.

**Note**

The time of each period cannot overlap.

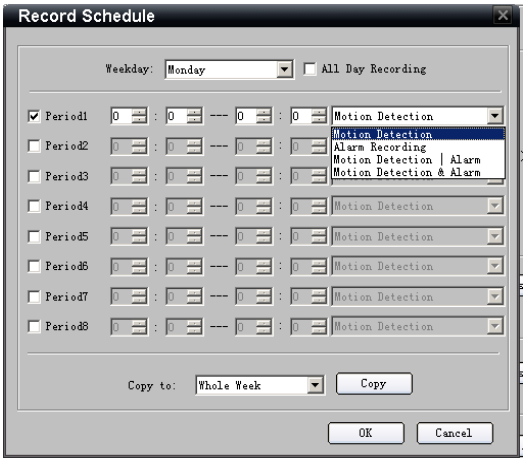



Figure 7-11

### 7.3.2.4 Motion Detection Setting

1. Click Motion Detection to enter the Motion Detection recording interface.
2. Select channel number for motion detection.

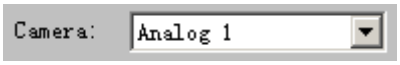



Figure 7-12

3. Select the 'Enable Motion Detection' checkbox to activate "Area Settings", "Arm Schedule" and "Linkage" settings.

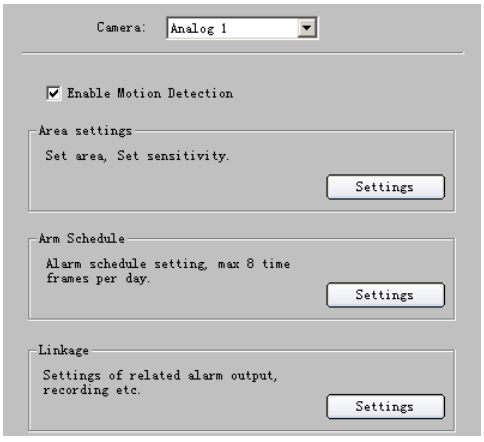



Figure 7-13

4. Set the motion detection area and sensitivity.
   Sensitivity 1 and 6 are the lowest and the highest level respectively.

Select the ‘Start Draw’ checkbox, and define the detection area by using the mouse.

Figure 7-14

5. Set the detection time.
   “Arm Schedule” can be one day or the whole week, and 8 periods for one day.

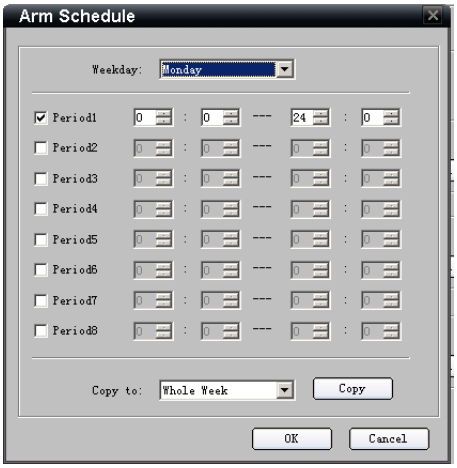



Figure 7-15

6. Set the “Trigger Recording” for linkage.
   Click “Settings” in the linkage area and select “Alarm Trigger Mode” tab, choose relevant modes.
   Select “Trigger Recording” tab, choose relevant channels.

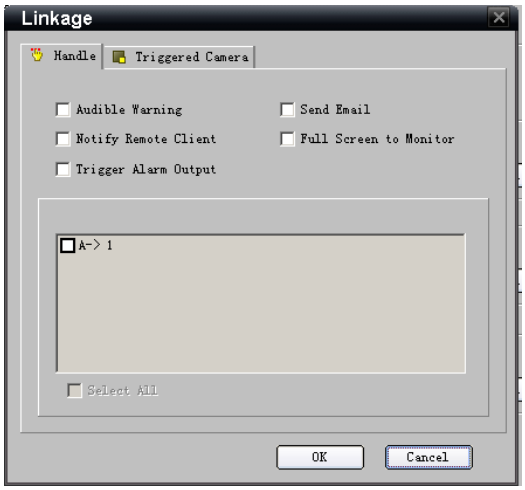



Figure 7-16

### 7.3.2.5 Video Loss

1. Select the channel number for video loss.
   Click Video Loss to enter Video Lost setting interface.
2. Select the 'Enable Video Loss' checkbox to activate the settings for "Arm Schedule" and "Linkage"

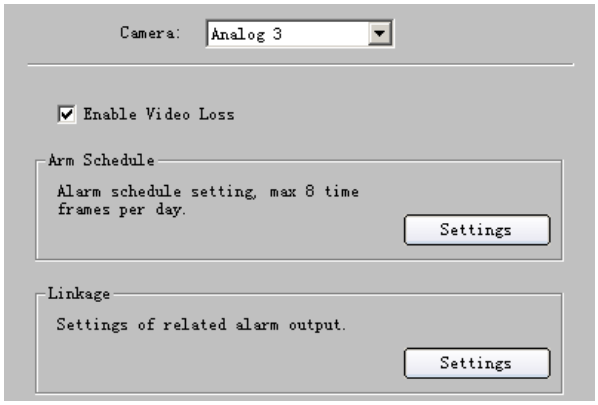



Figure 7-17

3. Set the Arm Schedule for video loss.
   Click "Settings" in the "Arm Schedule" menu.
   Select "Weekday" as a particular day of the week or the whole week for the schedule.

**Note**

The time of each period cannot overlap.

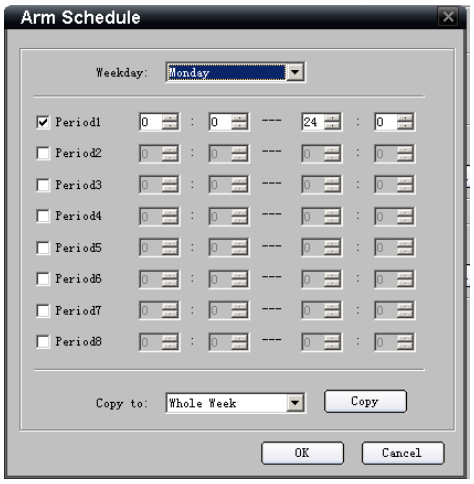



Figure 7-18

4. Set linkage for video loss.
   Click “Settings” in the “Linkage” menu.

**Note**

The Stop recording option is default ON, it will stop recording whenever video loss occurs.

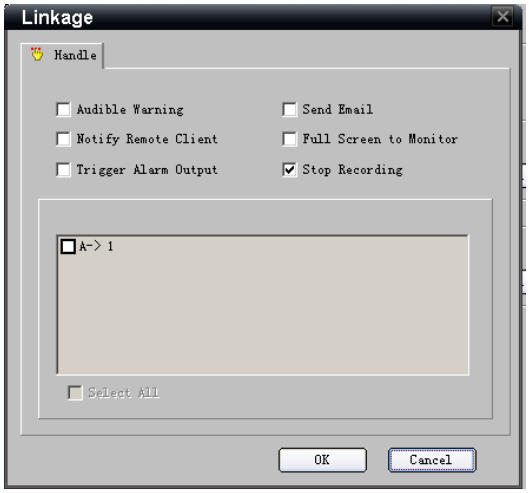



Figure 7-19

### 7.3.2.6 Video Tampering

1. Select the channel number for video tampering.
   Select Channel Parameters → Tamper Detection
2. Select the ‘Enable Tamper Detection’ checkbox to activate settings of “Area Settings”, “Arm Schedule” and “Linkage”.

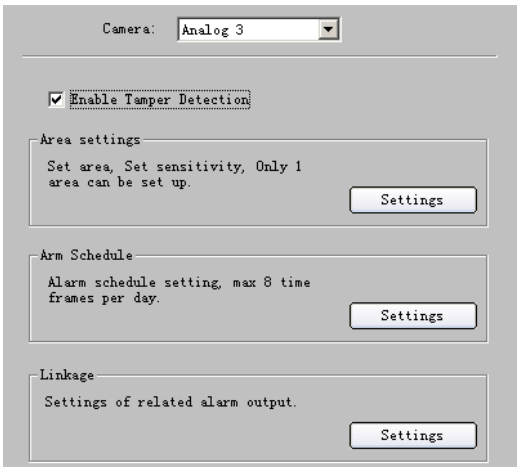



Figure 7-20

3. Set the video tampering area and sensitivity.
   The sensitivity can be divided into three levels: Low, Medium and High.
   Select the 'Start Draw' checkbox and select the detection area by using the mouse.

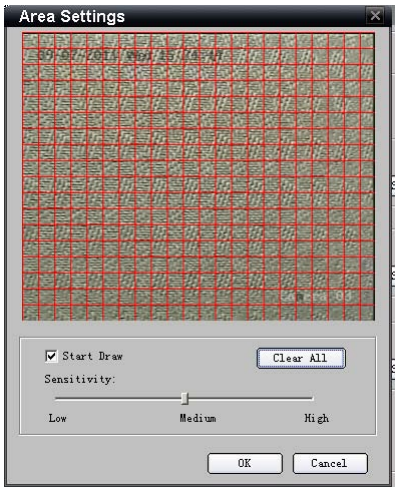



Figure 7-21

4. Set Arm Schedule for video tampering.
   Click "Settings" in the "Arm Schedule" menu.
   Select "Weekday" as a particular day of the week or the whole week for the schedule. Up to 8 "Periods" can be selected.

**Note**

The time of each period cannot overlap.

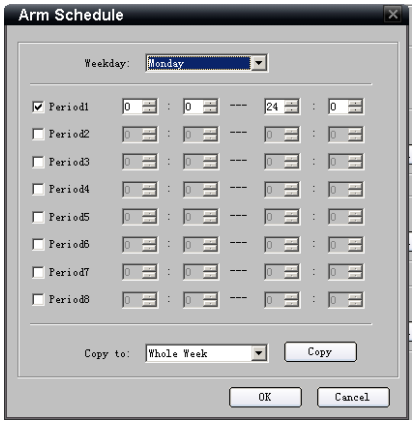



Figure 7-22

5. Set linkage for video tampering.
   Click “Settings” in the “Linkage” menu.

### 7.3.2.7 Video Mask

1. Select channel number, and select the “Enable Privacy Mask” checkbox.
   Select Channel Parameters → Privacy Mask

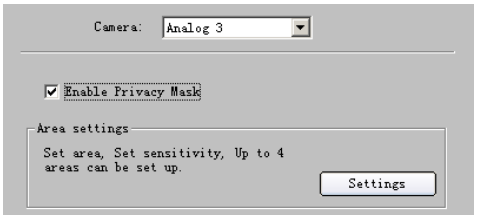



Figure 7-23

2. Set the mask area.
   Click “Settings” to enter the Area Settings menu.
   Select the ‘Start Draw’ checkbox select the mask area by clicking and dragging the mouse.

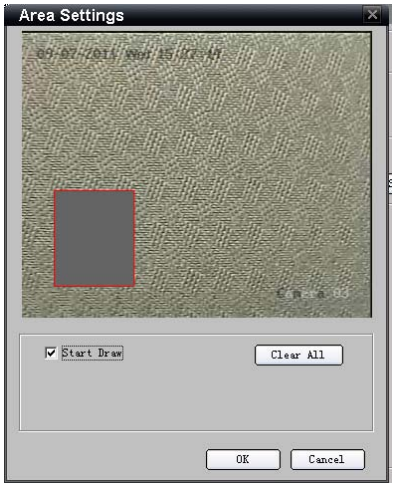



Figure 7-24

### 7.3.2.8 Text Overlay

You can add characters on the screen of the channel.

Select Channel Parameters → Text Overlay

Select the 'Strings 1' checkbox to enable text overlay, double click the strings area to input the characters you want to overlay on the screen. It supports 6 lines maximum with 44 characters maximum per line.

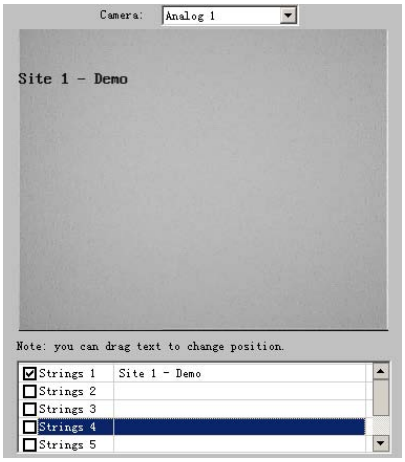



Figure 7-25

**Note**

TVR-LT can support up to 6 lines of text overlay except Date/Time and camera name.

## 7.3.3 Network Parameters

In the Remote Settings menu, select the Network Parameters to set the network and related parameters.

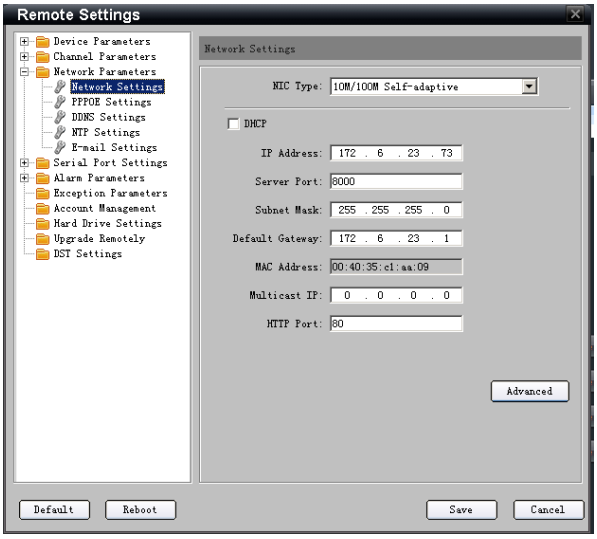



Figure 7-26

### 7.3.3.1 Basic Configuration

Select Network Parameters → Network Settings

Configure the network according to the actual situation. If you have a DHCP server running and would like your TVRVS2 to automatically obtain an IP address and other network settings from that server, check the **DHCP** checkbox.

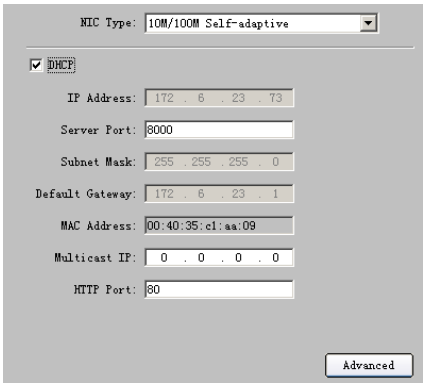

NIC Type: 10M/100M Self-adaptive
DHCP
IP Address: 172 . 6 . 23 . 73
Server Port: 8000
Subnet Mask: 255 . 255 . 255 . 0
Default Gateway: 172 . 6 . 23 . 1
MAC Address: 00:40:35:c1:aa:09
Multicast IP: 0 . 0 . 0 . 0
HTTP Port: 80
Advanced

Figure 7-27

Select “Advance” to enter advanced configuration. You can configure a preferred DNS Server1 and spare DNS Server2, and the IP address of the Alarm Host.

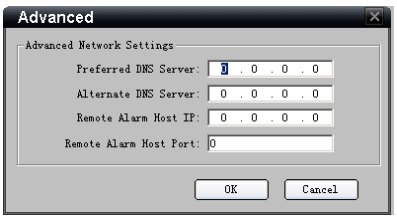

Advanced
Advanced Network Settings
Preferred DNS Server: 0 . 0 . 0 . 0
Alternate DNS Server: 0 . 0 . 0 . 0
Remote Alarm Host IP: 0 . 0 . 0 . 0
Remote Alarm Host Port: 0
OK
Cancel

Figure 7-28

| Parameters | Description |
|---|---|
| Device IP Address | Device's static IP address |
| Device Port | Device's port, default is 8000 |
| Subnet Mask | Subnet mask |
| Default Gateway | If you go through a gateway to connect to the server, enter the gateway address |
| MAC | Not modifiable |
| Multicast IP | For multicast, enter a D-class IP. Range: 224.0.0.0 - 239.255.255.255 |
| Http Port | Applicable when using IE to connect to the server, default is 80 |
| NIC Type | The default is 10M/100M Auto |
| DNS1 DNS2 | Preferred and spare DNS server |
| Alarm host | Alarm signal can be uploaded to the IP address automatically |

Table 7-4

### 7.3.3.2 PPPoE

Select Network Parameters → PPPOE Settings

Select he 'Enable PPPoE' checkbox, input the user name and password, then save the changes and reboot the device to make the parameters become effective.
If the connection is successful, the current IP address will be displayed in the "DDNS IP" field.

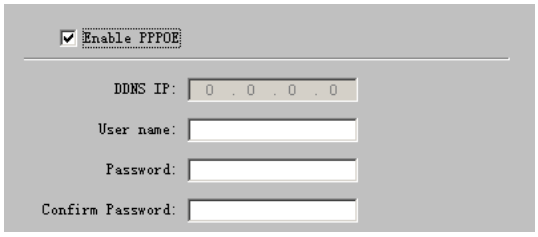



Figure 7-29

### 7.3.3.3 DDNS

Adopting the DDNS function can prevent any connection loss caused by dynamic IP.

Click Network Parameters → DDNS Settings

Select the 'Enable DDNS' checkbox.
If "IPServer" is selected as the protocol, then input the address where the IP server is running.

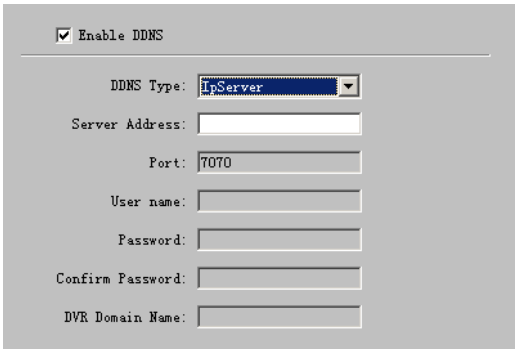



Figure 7-30

If “Dyndns” is selected as the protocol:

**Server Name:** Input the IP address of the server, such as members.dyndns.org;

**Domain:** the domain name that user applied to the device, such as test.dyndns.org;

**User name, password and verify:** the account information that the user registered on the Dyndns website

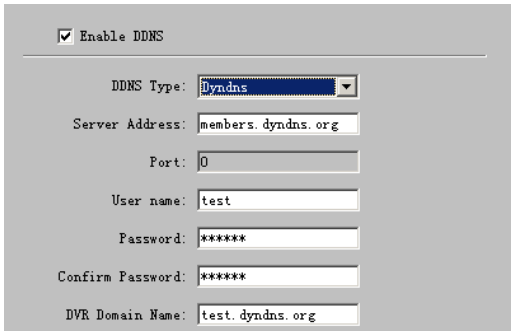



Figure 7-31

If “PeanutHull” is selected as the protocol:

Input the user name and password registered on the Peanut Hull website to access the device using the new domain name.

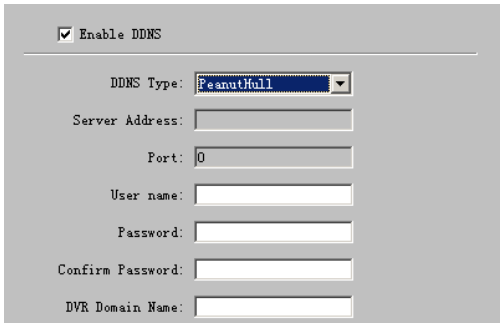



Figure 7-32

### 7.3.3.4 NTP Setting

NTP is used for regularly synchronizing the device time with the time server.

Select Network Parameters → NTP Settings
Select the ‘Enable NTP’ checkbox.

**Note**

Time Synchronization Interval: 0~10080 min (default 60min).

If the device is connected to the public network, the IP address of NTP server provided by the carrier can be input in the “Server Address” field;

If the device is connected to a private network, the IP address of the NTP server built by the NTP software can be input in the “Server Address” field.

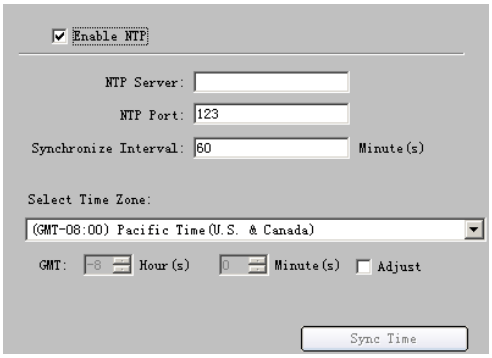



Figure 7-33

### 7.3.3.5 E-Mail

With E-mail configuration, an e-mail can be sent to designated mailboxes when there is an alarm.

Select Network Parameters → E-mail Settings

If server authentication is needed, select the ‘Server Authentication’ checkbox and input user name and password.
Input the sender and recipient information. If a photo is desired, you can also select the ‘Attach Image File’ checkbox.

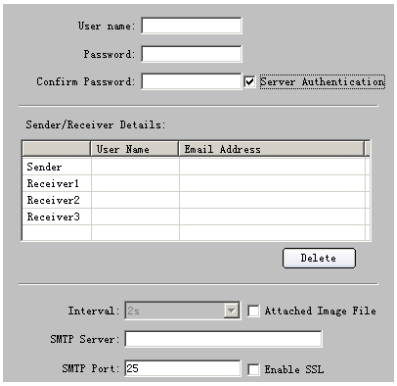



Figure 7-34

| Parameters | Description |
|---|---|
| User Name | Email account's user name |
| Password | Email account password |
| Sender | Name that appears in email |
| Receiver1, 2, 3 | Email recipient's name |
| Attachment | Send the email with the JPEG image when an Event occurs. |
| SMTP | SMTP supported email sending server |

Table 7-5

## 7.3.4 Serial Port Parameters

In the Remote Configuration menu, select the Serial Port Settings to set the serial parameters. In this interface, you can configure the RS232 and RS485 parameters.

1. Click "Configure" and enter the corresponding interface.
2. Right-click the device name and select "Remote Configuration" from the sub-menu.
3. Click Serial Port Settings to expand the options. Click on RS232 Settings.

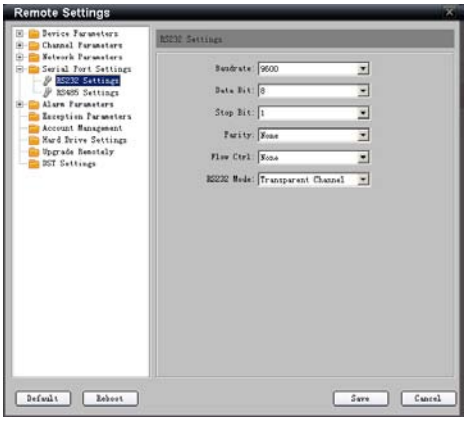



Figure 7-35

| Working Mode | Description |
|---|---|
| Control panel | Connect a PC to the TVR-LT using the PC serial port. Device parameters can then be set using software such as HyperTerminal. The serial port parameters must be the same as the TVR's when connecting with the PC serial port. |
| Transparent Channel | Connect a serial device directly to the TVR-LT. The serial device will be controlled remotely by the PC through the network and the protocol of the serial device. |

Table 7-6

**Note**

Changing RS232 mode requires a system reboot.

4. Click on RS485 Settings, shown as figure 7-36.
   Set parameters for each channel.

**Note**

RS-485 configuration must match the PTZ configuration.

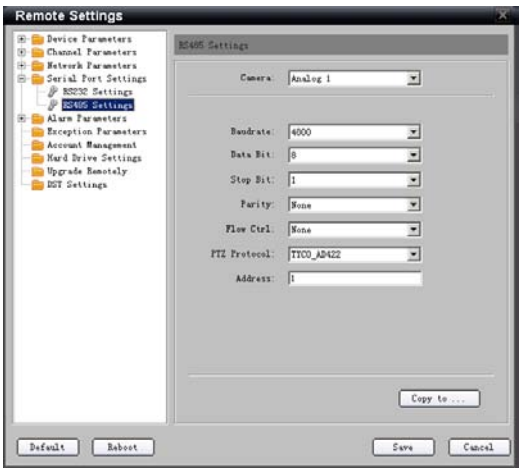



Figure 7-36

## 7.3.5 Alarm Parameters

In the Remote Configuration menu, select the Alarm configuration tab to set the alarm parameters. You can remotely configure the TVR-LT sensor alarm parameters.

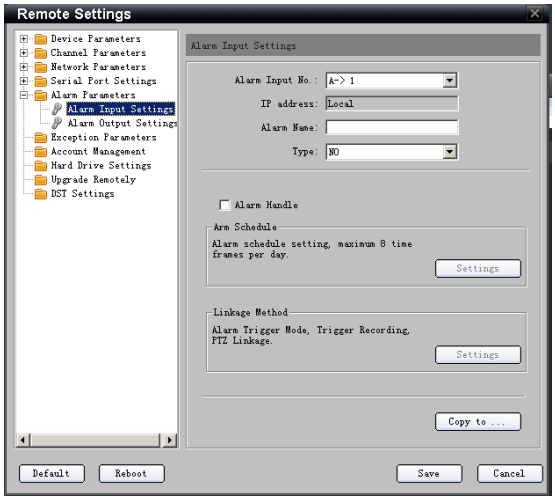



Figure 7-37

### 7.3.5.1 Alarm Input Settings

Select Alarm Parameters → Alarm Input Settings

1. Select alarm input.
2. Select the type of alarm input, “NO” or “NC”.

**Note**

Changes to alarm input type will become effective after rebooting.

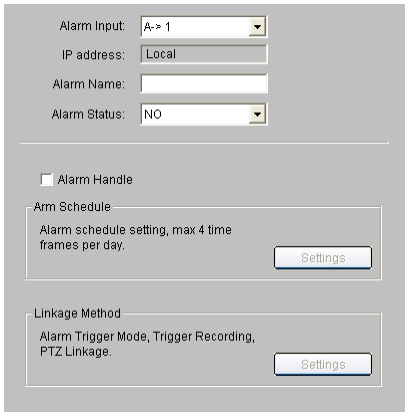



Figure 7-38

3. Select the 'Alarm Handle' checkbox to activate "Arm Schedule" & "Linkage Method".

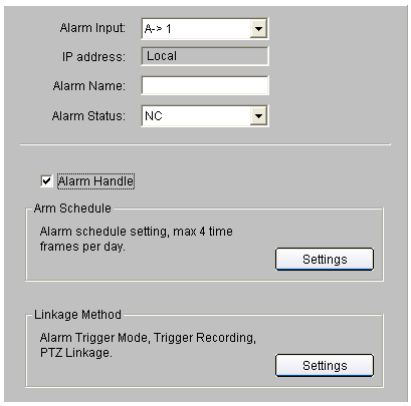



Figure 7-39

4. Set the Arm Schedule for alarm input.
   Click "Settings" in the "Arm Schedule" menu.
   Select "Weekday" as a particular day of the week or the whole week for the schedule.

**Note**

The time of each period cannot overlap.

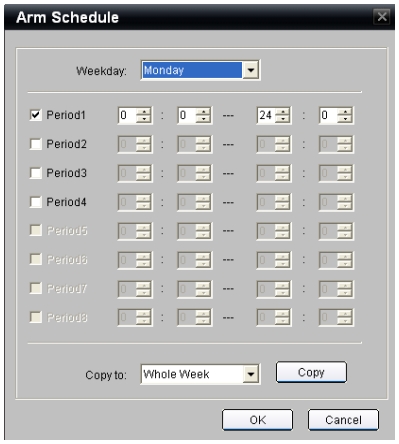



Figure 7-40

5. Set the alarm linkage for signal level and select the alarm output channel.

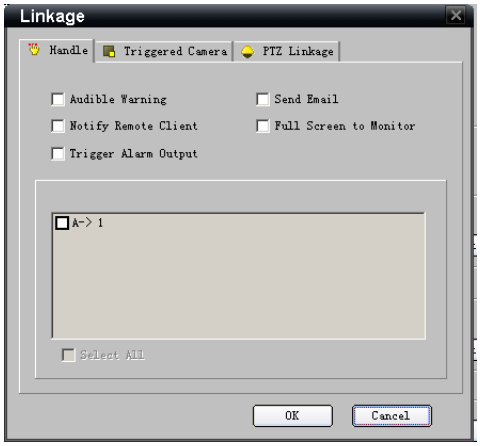



Figure 7-41

6. Set PTZ linkage for signal level alarm.

### 7.3.5.2 Alarm Output Settings

Select Alarm Parameters → Alarm Output Settings

1. Select alarm output and delay time.

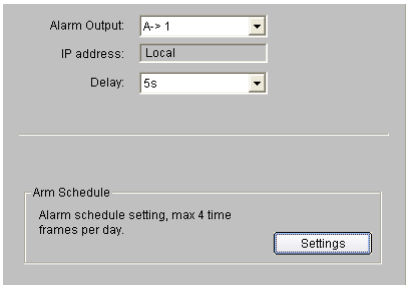



Figure 7-42

2. Set the alarm schedule for Alarm Output.
   Click “Settings” in “Arm Schedule” menu.
   Select “Weekday” as a particular day of the week or the whole week for the recording time.

**Note**

The time of each period cannot overlap.

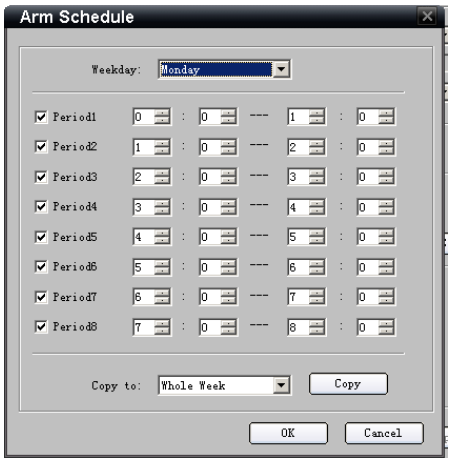



Figure 7-43

## 7.3.6 Exception Parameters

Exception parameters are for the alarm handling of abnormal events, which include “HDD Full”, “HDD Fault” (HDD errors or HDD not initialization), “Network Disconnected”, “IP Conflicted”, “Illegal Login” (user name or password wrong), “Video Output Standard Mismatch” and “Video Exception” (video signal unstable).

Select the exception type and handle method.
You can configure the exception’s response policy, including: Audible warning, Notify Remote Client, Send Email and Trigger alarm output.

Select Exception Parameters to enter the configuration interface.

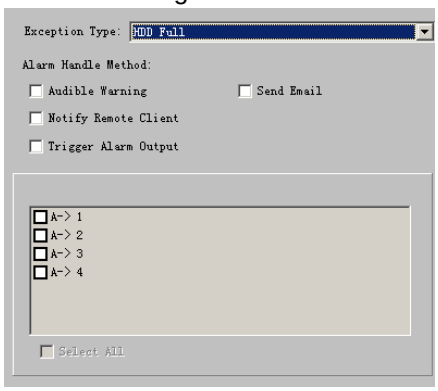



Figure 7-44

## 7.3.7 Account Management

The default user name and password for the device administrator are “admin” and “12345”. The administrator can remotely add and delete users and set permissions for users. The newly added users are divided into two levels: user and operator. (For the “Remote Configuration” privilege, the

Operator has “Voice Talk” rights, but a User does not; for the “Channel Configuration” privilege, The Operator has all rights, but the User only has local and remote playback rights.)

Select Account Management

Click “Add” to add user.

**Note**

If you set the IP address or physical address, only the PC with the same IP address or physical address can access the device via the network.

Figure 7-45

The ‘Status’ checkbox indicates if privilege is granted or not. If privileges are related to channels then a check in the ‘Status’ checkbox means privileges of all channels have been granted. No check in the ‘Status’ checkbox means no privileges have been granted for any channel.
Click ⊞ to unfold the channels, and set the privilege for each channel. If only some of the channels have operating privileges, the status will be ▣.

**Note**

Please refer to the user manual of the device for detailed descriptions of privileges.

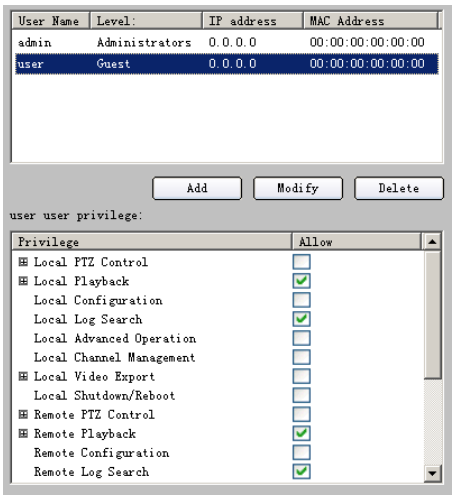



Figure 7-46

## 7.3.8 Hard drive Settings

HDD Format:

Click Hard drive settings

**Note**

Please back up the data before formatting hard disk.

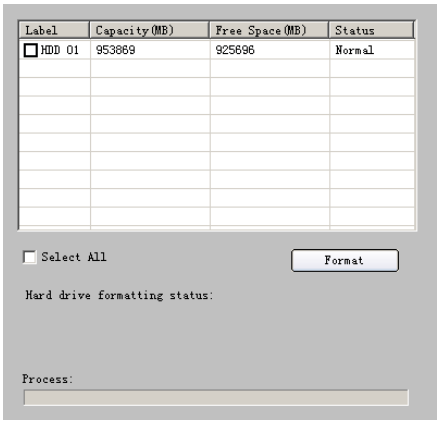



Figure 7-47

## 7.3.9 Upgrade Remotely

Remote Upgrade:

Click Upgrade Remotely

Click “Browse” to search for the local upgrade file. Click “Upgrade” to start the upgrade process.

Figure 7-48

**Note**

A system reboot is required after successful upgrade.

The user may need to update the Web Client after a firmware update. For Windows Vista and Windows 7, please reboot the computer to make the new Web Client become effective after an upgrade.

## 7.3.10 DST Settings

DST Settings:

Click DST Settings , then select the ‘Enable DST’ checkbox.

Select the start and end time for the DST function, select the DST Bias from the drop down list and save.

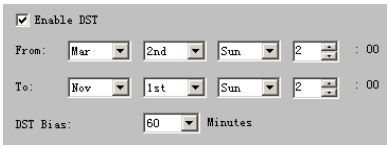

Enable DST
From:
Mar
2nd
Sun
2
: 00
To:
Nov
1st
Sun
2
: 00
DST Bias:
60
Minutes

Figure 7-49

# Part III Appendices

# Glossary

• **Dual Stream:** Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the TVR, with the main stream having a maximum resolution of 4CIF and the sub-stream having a maximum resolution of CIF/QCIF.

• **DVR:** Acronym for Digital Video Recorder. A DVR is a device that is able to accept video signals from analog cameras, compress the signal and store it on its hard drives.

• **HDD:** Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.

• **DHCP:** Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.

• **HTTP:** Acronym for Hypertext Transfer Protocol. A protocol used to transfer hypertext request and information between servers and browsers over network.

• **PPPoE:** PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.

• **DDNS:** Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.

• **NTP:** Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.

• **NTSC:** Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60Hz.

• **PAL:** Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50Hz.

• **PTZ:** Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.

• **USB:** Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

# Frequently Asked Questions

**Why does my TVR-LT make a beeping sound after booting?**

There are a few reasons for the warning beep your TVR-LT makes after booting.

**1.** There is no HDD present in the TVR-LT.

**2.** The HDD has not been initialized.

**3.** The HDD is defective.

**4.** If a PAL camera is attached to a channel when the TVR-LT has been configured for NTSC (or vice versa)

If you wish to use your TVR-LT without any HDDs, you may disable this warning beep in the Exception Settings menu (See **Setting Exception**).

**Why does the TVR-LT seem unresponsive when operating with the IR remote control?**

If your TVR-LT seems unresponsive when using the IR remote and you have read through the section **Using the IR Remote Control**:

**1.** Check that the batteries are installed correctly in the remote, making sure that the polarities of the batteries are not reversed.

**2.** Make sure the batteries are fresh and are not out of power.

**3.** Make sure the remote has not been tampered with.

**4.** Ensure there are no fluorescent lamps in use nearby.

**Why does the PTZ seem unresponsive?**

If the PTZ seem unresponsive:

**1.** Check that the RS-485 cable is properly connected.

**2.** Check that the dome decoder type is correct.

**3.** Check that the dome decoder speed configuration is correct.

**4.** Check that the dome decoder address bit configuration is correct.

**5.** Check to make sure that the main board RS-485 interface is not broken.

**Why is there no video recorded after setting the motion detection?**

If there is no recorded video after setting the motion detection:

**1.** Check that the recording schedule is set up correctly by following the steps listed in **Scheduling a Recording**.

**2.** Check that the motion detection area is configured correctly (See **Setting Up Motion Detection**).

**3.** Make sure that channels are being triggered for motion detection (See **Setting Up Motion Detection**).

# Recommended Bit Rate

| Frame rate / Resolution | 30 | 22 | 20 | 18 | 16 | 15 | 12 | 10 | 8 | 6 | 4 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4CIF | | | | | | | | | 640 | 448 | 320 | 160 | 80 |
| 2CIF | | | | | 768 | 640 | 512 | 448 | 384 | 256 | 192 | 96 | 48 |
| CIF | 768 | 640 | 512 | 512 | 448 | 384 | 320 | 256 | 224 | 160 | 128 | 64 | 32 |
| QCIF | 192 | 160 | 128 | 128 | 128 | 96 | 80 | 64 | 64 | 48 | 32 | 32 | 32 |

Table 1 TVRLT08YYY NTSC Recommended Bit Rate (Kbps)

| Frame rate / Resolution | 25 | 22 | 20 | 18 | 16 | 15 | 12 | 10 | 8 | 6 | 4 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4CIF | | | | | | | | | 640 | 512 | 320 | 160 | 80 |
| 2CIF | | | | | 896 | 768 | 640 | 512 | 448 | 320 | 224 | 128 | 64 |
| CIF | 768 | 768 | 640 | 640 | 512 | 512 | 384 | 320 | 256 | 192 | 128 | 64 | 32 |
| QCIF | 192 | 192 | 160 | 160 | 128 | 128 | 96 | 80 | 64 | 48 | 32 | 32 | 32 |

Table 2 TVRLT08YYY PAL Recommended Bit Rate (Kbps)

**Note**

ADTVR-LT08XXX supports Max. 8 fps @ 4CIF for main stream and real-time sub stream at QCIF.

| Frame rate / Resolution | 30 | 22 | 20 | 18 | 16 | 15 | 12 | 10 | 8 | 6 | 4 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4CIF | | | | | | | | | | 448 | 320 | 160 | 80 |
| 2CIF | | | | | | | 512 | 448 | 384 | 256 | 192 | 96 | 48 |
| CIF | 768 | 640 | 512 | 512 | 448 | 384 | 320 | 256 | 224 | 160 | 128 | 64 | 32 |
| QCIF | 192 | 160 | 128 | 128 | 128 | 96 | 80 | 64 | 64 | 48 | 32 | 32 | 32 |

Table 3 TVRLT16YYY NTSC Recommended Bit Rate (Kbps)

| Frame rate / Resolution | 25 | 22 | 20 | 18 | 16 | 15 | 12 | 10 | 8 | 6 | 4 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4CIF | | | | | | | | | | 512 | 320 | 160 | 80 |
| 2CIF | | | | | | | 640 | 512 | 448 | 320 | 224 | 128 | 64 |
| CIF | 768 | 768 | 640 | 640 | 512 | 512 | 384 | 320 | 256 | 192 | 128 | 64 | 32 |
| QCIF | 192 | 192 | 160 | 160 | 128 | 128 | 96 | 80 | 64 | 48 | 32 | 32 | 32 |

Table 4 TVRLT16YYY PAL Recommended Bit Rate (Kbps)

**Note**

ADTVR-LT16YYY only supports 4CIF up to 6fps, and real-time sub stream @ QCIF.

# How to Replace the Motherboard Battery

1. **Preparation**

   1.1 Due to the disassembly required it is recommended that a service technician should replace the motherboard clock battery if required.

   1.2 The Motherboard comes with a CR1220 lithium button cell battery, it may last the life of the product.

   1.3 Disconnect the power and then remove the cover

   1.4 Use ESD precautions when removing and replacing the batteries; do not handle the battery directly.

   1.5 Use non-conductive tweezers or a cotton cloth to handle the battery.

2. **Replacement instruction**

2.1 Push the clip with tweezers in the direction shown in figure 20-1; battery will pop up as shown in figure 20-2. Ensure the battery does not fall onto the motherboard.

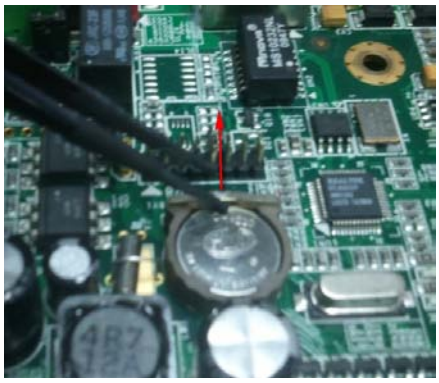


Figure 1

Figure 2

2.2 Lift out the battery using a cotton cloth or non-conductive tweezers as in figure 20-4.

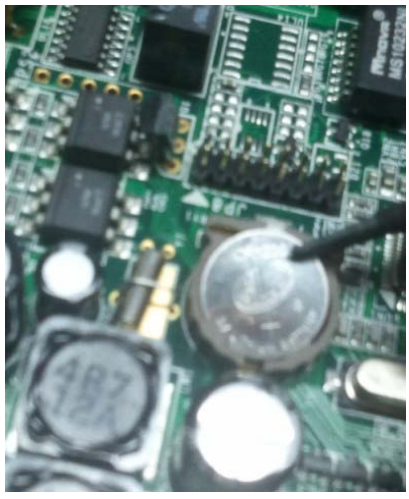


Figure 3

Figure 4

2.3 Put the new battery into the socket, press the battery tightly to make sure it is locked by the clip; ensure the correct polarity with positive upwards.

Figure 5

3. **Reassemble the TVR-LT and reset Time / Date.**

# How to Preview via Touch Tracker ADTT16E

The ADTT16E Touch Tracker is for use with the TVRLT where the user desires local control only of PTZ cameras that have been installed using the 2-wire SensorNet protocol. It is not for use with PTZ cameras that have been installed using RS422 control provided directly from the rear of the TVRLT where control is both local and remote.
The user can also achieve preview-related operations using a Touch Tracker ADTT16E keyboard. The following diagram shows the typical connection. An RS232 cable is connected from the ADTT16E EIM Box to the TVR serial port.

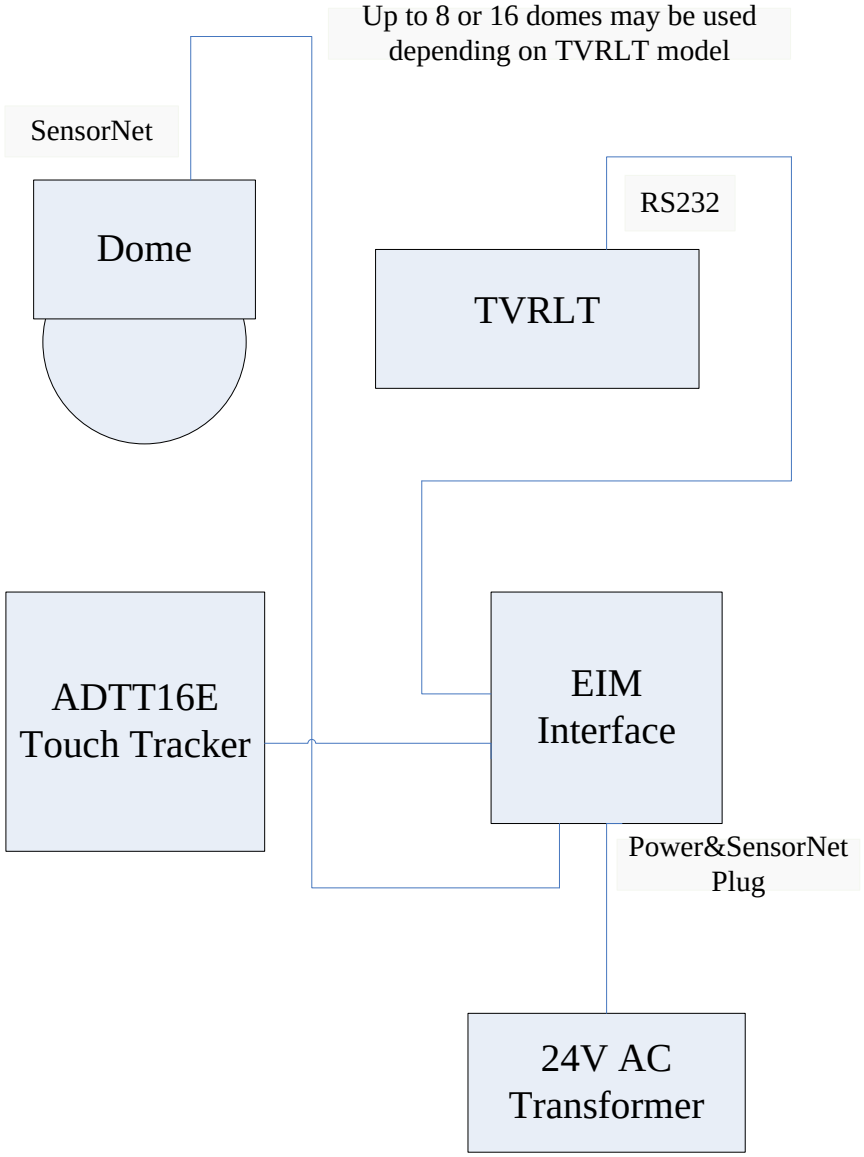



Figure 6

The settings for the TVRLT Serial Port are as follows:
Baud rate: 9600
Data bit: 8
Stop bit: 1
No flow control
No parity
Transparent Channel mode

The setting for the ADTT16E Touch Tracker must be set to **Device=Mux 16 Triplex**

**Supported functions:**

| | |
|---|---|
| ADTT16E BUTTON | LIVE MODE<br>By default the ADTT16E powers up in this mode, but if it is not in this mode press the D button |
| Number buttons 1 to 16 plus CAMERA button | Selects a camera number.<br>If only CAMERA button is pressed, D button must be pressed to continue using other LIVE functions. |
| Previous | Selects previous camera |
| Next | Selects next camera |
| Monitor | Selects available display modes depending on the number of TVR video channels; subsequent presses will cycle through the various display modes<br>4 channel – 1x1; 2x2;1x1<br>8 channel – 1x1; 2x2; 3x3; 1x1<br>16 channel – 1x1; 2x2; 3x3; 4x4; 1x1 |
| C Button | Selects the camera group when used in conjunction with the Monitor display mode; subsequent presses of this button allows the next group of cameras in a selected display mode to be viewed. E.g. In 2x2 display mode the first group of cameras is 1-4, then 5-8, 9-12, 13-16 and back to 1-4<br>Note the D button does not need to be pressed when the user has finished with the C button |
| B Button | Toggles auto-switch for MAIN TVR monitor when auto sequencing is set up; pressing this button will halt or re-start the sequence. Note once the sequence has been halted or re-started, button D must be pressed to continue using any other LIVE functions with the ADTT16E |
| A Button | No function at present, but if pressed it is essential to press button D to continue using any other LIVE functions with the ADTT16E |
| D Button | Must be pressed after using any function associated with either the A or B button. |

Table 3

**Note**

Number buttons, Camera button, Previous, Next, Monitor and C button cease to be valid when either button A or B is pressed. To re-enable these buttons after A or B has been pressed, button D must be pressed.

For any exceptional conditions absent in this part, please refer to the user manual for the Touch Tracker ADTT16E.

# How to Control SensorNet Dome via the ADACSNETH USB Module

The ADACSNETH USB Module is for use with the TVR where the user desires to control PTZ cameras that have been installed using the 2-wire SensorNet protocol but wishes to make us of the RS422 control that is available from the TVR. Unlike the Touch Tracker, described above, this method allows PTZ control both locally and remotely.
When either the AD422 or AD422VS protocol is selected in the TVR-LT for PTZ control, the SensorNet Dome must be controlled via the ADACSNETH USB module.
The following diagram shows the typical connection. The TVR-LT PTZ 485 output must be connected to the ADACSNETH USB Module, which in turn makes a Sensornet connection to the required PTZ cameras, i.e. it converts the received RS422 commands from the TVR-LT and re-transmits them as Sensornet commands to the PTZ cameras. Power for the ADACSNETH USB module is supplied via a TVR-LT USB port.

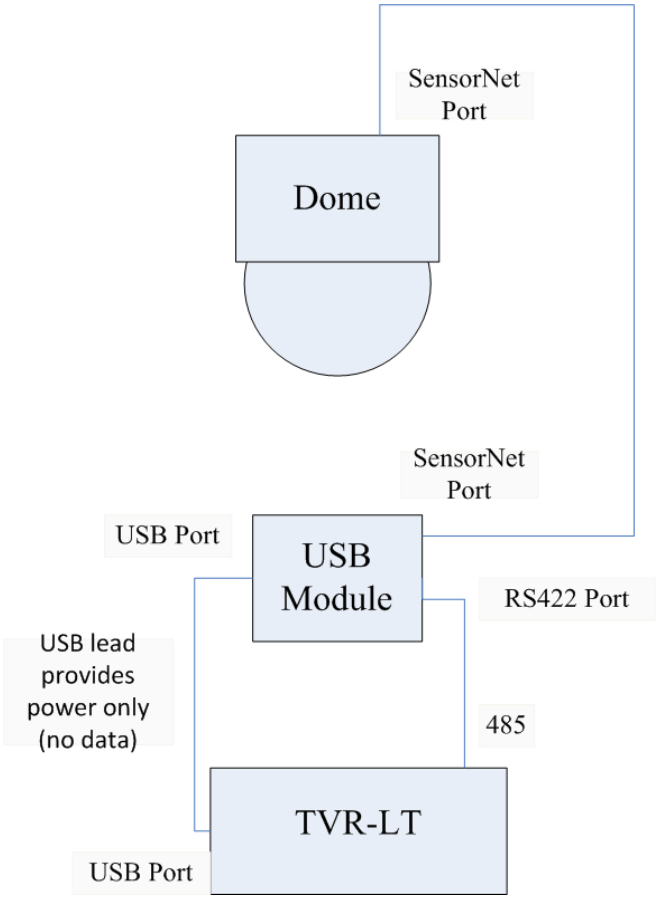



Figure 7

**Note**
The Baud Rate of PTZ settings in TVR-LT must be set to 38400 when using the USB Module.